National Weather Service
Storm Data and Unusual Weather Phenomena

January 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ063-066 **Dane - Milwaukee**

02	**1300CST** **1500CST**	**0**	**0**			**Record Warmth**

South winds ahead of a low pressure moving through the Madision (Dane Co.) area pulled mild air into southern Wisconsin allowing Milwaukee to establish a new daily record maximum temperature of 56 at 1316CST. The old record was 54 set back in 1897. Above normal temperatures from the beginning of winter had an effect on the ice-over of Lake Mendota and Lake Monona in Madison. On January 14th both lakes finally froze over, making it the second latest ice-over (Jan 30, 1932 is the latest). Average ice-over dates are December 20th for Lake Mendota and Dec 15th for Lake Monona). Both lakes have tended toward earlier openings over recent years, such as in 1998 when Mendota lost its ice cover on February 27th after freezing over on Jan 11th. That was the shortest ice-cover period on record.

WIZ047-051>052-057>058-068 **Green Lake - Fond Du Lac - Sheboygan - Columbia - Dodge - Green**

03 **04**	**1800CST** **0600CST**	**0**	**0**			**Winter Storm**

The first major winter storm of the 1999-2000 winter season struck parts of southcentral and southeast Wisconsin (almost a year to the date after a major January 1999 winter storm/blizzard). The combination of northwest to north winds frequently gusting to 25 mph and snowfalls accumulations of 4 to 6.5 inches created winter storm conditions as locally defined. Beaver Dam (Dodge Co.) recorded the largest total of 6.5 inches. The remainder of southern Wisconsin experienced snowfall totals of 3 to 5 inches but had weaker winds below warning criteria. Numerous vehicle accidents (estimated at 300 for southcentral and southeastern counties) were noted by area newspapers due to the combination of ice roads and visibilities of 1/2 to 1 mile. Several schools delayed their opening by 2 hours. Synoptically, low pressure tracked from southern Missouri to northern Indiana to Lake Huron.

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

09 **10**	**0000CST** **0500CST**	**0**	**0**			**Fog**

Dense fog with visibilities frequently near or below 1/4 mile blanketed southcentral and southeast Wisconsin for about 29 hours, leading to many airline delays or cancellations at area airports. Dozens of vehicle accidents were noted by area newspapers. South to southeast winds pulled mild air (maximum temperatures in the upper 30s to lower 40s) into southern Wisconsin resulting in considerable snowmelt, while scattered light rain passed overhead. Consequently, there were ample amounts of low level moisture to initiate the widespread dense fog.

WIZ072 **Kenosha**

22	**0000CST** **0800CST**	**0**	**0**	**10K**		**Extreme Cold**

A frozen water pipe burst around 0430CST in a city of Kenosha restaurant, resulting in water damage to interior contents. Minimum temperatures the day before ranged from 3 below to 8 below across Kenosha County with daytime maximum readings only 5 to 10 above zero. Morning lows on the 22nd were 5 to 10 above. While none of these readings were new records, they were considerably below normal for the time of the year.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ067>069 **Lafayette - Green - Rock**

17	**2300CST**	**0**	**0**		**Winter Storm**
18	**1900CST**				

WIZ070>072 **Walworth - Racine - Kenosha**

18	**0200CST**	**0**	**0**		**Winter Storm**
	1900CST				

A significant winter storm, only the second of the winter season, affected far southern Wisconsin for 17 to 20 hours. Maximum snowfall rates were occasonally 1/2 to 1 inch per hour. East to northeast winds of 15 to 25 mph resulted in blowing and drifting of snow. In open areas visibilities were reduced to 3/8 to 1/2 mile. Maximum snowfall accumulations were 11 to 12 inches in southern Kenosha County, 10 inches at Lake Geneva (Walworth Co.), 10 inches in extreme southwest Racine County, and 9 inches across the southern parts of Rock, Green, and Lafayette Counties. Further north, in the Madison to Milwaukee corridor, 4 to 7 inches fell, which was below the winter storm criteria of 8 inches or more in 24 hours or less. Due to a 36-hour lead time for the Winter Storm Watch, highway snowplow crews were prepared well in advance. However, motorists still had a tough time driving on slippery roads. About 110 vehicle accidents were noted in Kenosha County alone, and there were probably about 300 total across the winter storm area. Newspaper accounts indicated that about 75 people were injured. This winter storm was preceded by an 8 to 12 hour period of scattered light snow. The responsible low pressure center moved from the southern Rockies to extreme northern Oklohoma to southern Illinois to central Ohio.

WIZ051-063-066-069 **Fond Du Lac - Dane - Milwaukee - Rock**

23	**1200CST**	**0**	**0**		**Record Warmth**
29	**1800CST**				

A prolonged period of well above normal temperatures affected southern Wisconsin at the end of February, 2000. Daily maximum temperatures were 15 to 30 degrees above normal while nighttime lows were 15 to 25 degrees above normal. Several new recored daily maximum temperatures and high minimum records were set. Janesville (Rock Co.) registered 68 on February 23rd, breaking the old record of 58 set back in 1932. On the 25th, Madison (Dane Co.) set a new daily and all-time February record of 64 degrees, while Milwaukee (Milwaukee Co.) had a new record high minimum of 40. On the 26th, Milwaukee reached 64, breaking the old record of 62 set back in 1932. Madison came in with 61, breaking the old record of 59 set only in 1998. Fond du Lac (Fond du Lac Co.) came in with 65, breaking the old record of 56 set back in 1932. On the 26th, Milwaukee also had a new high minimum record of 47. On the 29th, Madison set a new maximum temperature record of 60, while Milwaukee did the same with 61. Many area lakes in southern Wisconsin lost their ice cover due to this prolonged warm spell.

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

25	**0000CST**	**0**	**0**		**Fog**
	1200CST				

Dense fog developed and persisted across southern Wisconsin for about 21 hours as a warm front stalled over northern Illinois. Snowmelt and ice melt along with southeast winds pulling mild air into the region set the stage for poor visibilities which were frequently below 1/4 mile to near zero. Roughly 60 percent of the incoming and outgoing flights at Milwaukee's Mitchell Field were canceled, but the figure was only about 20 percent at Madison's airport. Needless to say, there were numerous vehicle accidents. Two teenagers were killed when their car struck the backend of a school bus in western Fond du Lac County. Four people were injured in an accident in Somers (Kenosha Co.).

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ063-066 **Dane - Milwaukee**

04 1200CST
08 1700CST

0 **0** **Record Warmth**

A long period of near-record or record warmth affected all of southern Wisconsin during the early part of March, 2000. A persistant upper-level pattern that favored a jet stream position to the northwest or north of Wisconsin allowed warm air to be pushed into Wisconsin. Madison (Dane Co.) set a new record highs of 68 on the 5th, 69 on the 6th, 77 on the 7th, and 73 on the 8th. Madison also set new record high minimums of 50 on the 7th and 8th. Milwaukee (Milwaukee Co.) set new record highs of 59 on the 4th, 77 on the 7th, and 77 on the 8th. The 77 degrees highs on the 7th were are now the highest readings so early in the year for both Madison and Milwaukee. Newspaper articles indicated silver maples and pussy willows started to bud, and many migratory birds returned several weeks early. Many golf courses opened up while ski resorts closed. Normal highs and for early March across southern Wisconsin are in the mid to upper 30s while minimums are in the lower to middle 20s.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
Dane County									
Mt Horeb	**08**	**1658CST**			**0**	**0**			**Hail (1.75)**
Walworth County									
Lake Geneva	**08**	**1700CST**			**0**	**0**			**Hail (0.75)**
Iowa County									
5 NE Hollandale	**08**	**1708CST**			**0**	**0**			**Hail (1.00)**
Columbia County									
Portage	**08**	**1710CST** **1713CST**			**0**	**0**	**4K**		**Hail (1.75)**
Sauk County									
4 N Reedsburg	**08**	**1710CST**			**0**	**0**			**Hail (0.75)**
Dane County									
Blue Mounds	**08**	**1721CST**			**0**	**0**			**Hail (1.75)**
Dodge County									
Leroy	**08**	**1725CST**			**0**	**0**			**Hail (0.75)**
Columbia County									
7 N Portage	**08**	**1730CST**			**0**	**0**	**1K**		**Hail (0.75)**
Columbia County									
Wisconsin Dells	**08**	**1730CST** **1735CST**			**0**	**0**	**1K**		**Hail (0.75)**
Fond Du Lac County									
3 NE Waupun	**08**	**1730CST**			**0**	**0**			**Hail (1.00)**
Green Lake County									
Princeton	**08**	**1730CST**			**0**	**0**			**Hail (0.75)**
Racine County									
3 NW Waterford	**08**	**1730CST**			**0**	**0**			**Hail (1.00)**
Kenosha County									
Bristol	**08**	**1732CST**			**0**	**0**			**Hail (0.75)**
Marquette County									
3 S Glenoak	**08**	**1735CST**			**0**	**0**			**Hail (1.00)**
Waukesha County									
Muskego	**08**	**1743CST**			**0**	**0**			**Hail (0.75)**
Rock County									
5 E Milton	**08**	**1745CST**			**0**	**0**			**Hail (0.75)**
Dane County									
Marshall	**08**	**1754CST**			**0**	**0**			**Hail (1.00)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Marquette County									
3 N Montello	**08**	**1800CST**			**0**	**0**			**Hail (0.75)**
Milwaukee County									
Greenfield to Milwaukee	**08**	**1802CST 1815CST**			**0**	**0**			**Hail (1.25)**
Jefferson County									
Waterloo	**08**	**1804CST**			**0**	**0**			**Hail (0.75)**
Columbia County									
3 N Pardeeville	**08**	**1805CST**			**0**	**0**			**Hail (1.00)**
Dodge County									
4 S Danville	**08**	**1806CST**			**0**	**0**			**Hail (0.75)**
Milwaukee County									
Milwaukee Mtchell Ar to St Francis	**08**	**1810CST 1820CST**	**1.7**	**75**	**0**	**16**	**4.6M**		**Tornado (F1)**

Narrative can be found below in summary of March 8, 2000.

Green Lake County									
Marquette	**08**	**1813CST**			**0**	**0**			**Hail (0.75)**
Dodge County									
Lowell to Juneau	**08**	**1820CST 1827CST**			**0**	**0**			**Hail (1.75)**
Jefferson County									
Palmyra	**08**	**1820CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
4 N Eagle	**08**	**1825CST**			**0**	**0**			**Hail (1.00)**
Ozaukee County									
Port Washington	**08**	**1830CST 1835CST**			**0**	**0**			**Hail (0.75)**
Washington County									
2 W Wayne	**08**	**1845CST**			**0**	**0**			**Hail (0.75)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Waukesha County									
Wales to Hartland	**08**	**1845CST 1850CST**			**0**	**0**			**Hail (1.00)**
Dodge County									
Horicon	**08**	**1850CST**			**0**	**0**			**Hail (1.00)**
Walworth County									
Whitewater	**08**	**1850CST**			**0**	**0**			**Hail (0.88)**
Dodge County									
Theresa	**08**	**1855CST 1857CST**			**0**	**0**			**Funnel Cloud**
Fond Du Lac County									
Byron	**08**	**1905CST**			**0**	**0**			**Hail (1.50)**
Washington County									
Germantown	**08**	**1915CST 1920CST**			**0**	**0**			**Hail (0.75)**
Fond Du Lac County									
Campbellsport	**08**	**1920CST**			**0**	**0**			**Hail (1.00)**
Ozaukee County									
Port Washington	**08**	**1933CST**			**0**	**0**			**Hail (1.50)**
Milwaukee County									
Milwaukee	**08**	**1935CST**			**0**	**0**			**Hail (1.00)**
Ozaukee County									
Mequon	**08**	**1950CST**			**0**	**0**			**Hail (0.75)**
Milwaukee County									
Milwaukee	**08**	**1952CST**			**0**	**0**			**Thunderstorm Wind (G58)** [M]

After several days of record-breaking warmth, the stage was set for an out-of-season severe weather outbreak across southcentral and southeast Wisconsin. The city of Milwaukee recorded it's earliest tornado ever (just before sunset), and an extremely large number of reports of large hail from 3/4 to 1.75 inches in diameter were relayed to the NWS Sullivan office. Most of the thunderstorms developed gusty winds on the order of 30 to 50 mph, but one managed to generate a gust of 58 knots (67 mph) at the TV-4 station on the north side of Milwaukee. The thunderstorm which dumped large hail 7 N of Portage also had winds that uprooted some trees and blew a car off of Inerstate 39. An earlier thunderstorm that affected the west side of the city of Portage left the ground white with golf-ball size hail that also shattered several vehicle windshields. The thunderstorm that affected Wisconsin Dells also left the ground white with hail.

The Milwaukee tornado spun up about 1/2 mile east/northeast of the terminal building of General Mitchell International Airport, just east of Runway 19, moved northeast and crossed East Layton Avenue just east of South Pennsylvania Avenue in Cudahy, continued northeast through St. Francis, and dissipated over the northwest corner of Nathanael Greene Park. Apparently the tornado wasn't strong enough to cause any damage on the airport grounds, but it did cause considerable damage in Cudahy and St. Francis. Fifty-three (53) residental homes sustained minor damage and eleven (11) had major damage. Eight (8) businesses sustained major damage. Many motor vehicles were over-turned, several roofs were partially peeled off of homes, power lines and trees were toppled, and gas leaks were reported. Sixteen (16) people were injured enough to require medical treatment (lacerations), but there were no fatilities. Most of the people who were injured were in their vehicles. Based on this damage, it is estimated that maximum wind speeds of this tornado were 105 to 110 mph. The airport terminal building and control tower went on emergency power after commercial power was disrupted. Airport control tower officials were able to divert airplane traffic, consequently there were no aircraft mishaps. Preceding the tornado, there were reports of large hail and some tree damage in the forward flank downdraft of the parent thunderstorm over St. Francis and the southern part of the city of Milwaukee. The tornado was extensively photographed and captured on video tape. It briefly displayed multiple-vortex characterisitics. The last time a tornado was documented in Milwaukee County was in May, 1989.

NWS Sullivan meteorologists speculate that an outflow boundary was pushed northwest to the airport area from a thunderstorm that earlier moved through the southeast corner of Milwaukee County. This outflow boundary may have focused low-level vorticity that helped generate the tornado. The parent thunderstorm possessed a mesocyclone. Synoptically, a deep low pressure was moving northeast through central Iowa toward northern Wisconsin. This movement put southern Wisconsin in a "dry slot" associated with strong jet stream winds aloft. The combination of surface dewpoints in the lower to mid 50s, strong speed shear between surface winds out of the south and southwest mid-level winds, sufficient instability due to daytime heating/temperatures in the 70s, and cold air aloft allowed thunderstorms to grow to 40,000 feet. Several thunderstorms had supercell characturistics, but only one was

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

assoicated with a tornado, and another with a funnel cloud. Thunderstorm movement was northeast at 50 to 60 mph (about 47 to 51 knots).

WIZ046>047-056>057-062>063-067>069 **Marquette - Green Lake - Sauk - Columbia - Iowa - Dane - Lafayette - Green - Rock**

20	**2100CST**	**0**	**0**		**Fog**
21	**0800CST**				

Dense fog formed during the overnight hours and reduced visibilities to 1/4 mile or less. Numerous vehicle accidents resulted

WIZ051>052-058>060-064>066-070>072 **Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee - Jefferson - Waukesha - Milwaukee - Walworth - Racine - Kenosha**

21	**0100CST**	**0**	**0**		**Fog**
	1000CST				

Dense fog developed during the overnight hours and reduced visibilities to 1/4 mile or less. Numerous vehicle accidents resulted.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ046>047-056>057-062>063-067>069 **Marquette - Green Lake - Sauk - Columbia - Iowa - Dane - Lafayette - Green - Rock**

07 **0600CST** **0** **0** **Winter Storm**
2000CST

Narrative discription can be found in the group containing the counties in southeast Wisconsin (same storm/same day)

WIZ051>052-058>060-064>066-070>072 **Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee - Jefferson - Waukesha - Milwaukee - Walworth - Racine - Kenosha**

07 **0900CST** **0** **0** **Winter Storm**
2359CST

A late season winter storm struck southcentral and southeast Wisconsin with a prolonged period of moderate to occasionally heavy snow, northeast winds 20-25 mph (17-22 knots) gusting to 35-45 mph (30-41 knots), poor visibilities of 1/4 to 3/4 miles, and temperatures in the upper 20s to lower 30s. At the start of the winter storm the snow was melting just about as fast as it was falling, but by mid-afternoon the snow was accumulating which led to considerable blowing and drifting of snow. Snow drifts attained a height of 2 to 4 feet in exposed locations. Some light freezing drizzle was observed at times in between the convective-like snow bands that rotated northwestward across the area. During the late afternoon hours near-blizzard or near white-out conditions were occasionally observed which led to numerous vehicle accidents and indirectly-related injuries in some cases. There was at least 1 indirectly-related vehicle accident fatality (Rock County). The storm finally let up during the nighttime hours

Snow accumulations over southcentral Wisconsin varied from 3 to 5 inches, but western Dane county had accumulations of 5 to 8.5 inches. Accumulations over southeastern Wisconsin varied from 4 to 7 inches, but the West Allis area (Milwaukee County) picked up 9.4 inches and the West Bend area (Washington County) registered 9 inches. The city of Racine (Racine County) had the highest measured wind gust of 47 mph (41 knots). Synoptically, the responsible low pressure moved across southern Kansas through central Illinois to northern Indiana into lower Michigan. Moisture evaporating from ice-free Lake Michigan probably enhanced the snow accumulations across southeastern Wisconsin.

Walworth County

Darien **19** **2343CST** **0** **0** **Hail (2.00)**

Scattered, fast-moving (40-45 knots, or around 50 mph) thunderstorms moved northeast into southeastern Wisconsin during the overnight hours while surface temperatures were in the 40-45 degree range. One storm pulsed to severe limits and dumped hail up to 2 inches in diameter over southwestern Walworth county. Brief heavy rains left 1/4 to 1/2 inch rainfall amounts.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
WIZ066	**Milwaukee**								
	06	**0500CST 0600CST**			**0**	**0**			**Record Warmth**
	Thanks to south winds, Milwaukee set a new daily record high minimum of 64, breaking the old reading of 62 set back in 1939.								
Iowa County									
1 W Cobb	**08**	**0655CST**			**0**	**0**	**10K**		**Thunderstorm Wind (G52)**
Lafayette County									
Shullsburg	**08**	**0655CST**			**0**	**0**			**Hail (1.00)**
Green County									
2 W Monroe to Albany	**08**	**0713CST 0725CST**			**0**	**0**	**75K**		**Thunderstorm Wind (G70)**
Green County									
4 E Dayton	**08**	**0728CST**			**0**	**0**	**10K**		**Thunderstorm Wind (G70)**
Rock County									
2 NW Fulton to Edgerton	**08**	**0730CST 0735CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Dane County									
Black Earth	**08**	**0745CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Rock County									
5 NE Milton	**08**	**0750CST**			**0**	**0**			**Hail (1.00)**
Jefferson County									
Hebron	**08**	**0800CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
Delafield	**08**	**0825CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Scattered severe thunderstorms with large hail and damaging straight-line winds exploded across south-central and southeast Wisconsin after sunrise. The powerful winds leveled trees and power lines just west of Cobb (Iowa Co.), around Black Earth (Dane Co.), from Fulton to Edgerton (Rock Co.), and from around Monroe east to Albany (Green Co.). In addition, east of Monroe(Green Co.) a pole shed was pushed over, a barn's roof was peeled off, and two swing sets were damaged by the winds. A semi tractor-trailer was blown over east of Dayton (Green Co.). The severe weather was the result of several days of above normal daytime temperatures in the 80s and dewpoints rising into the 60s resulting in an unstable airmass. A cold front dropping southeast across southern Wisconsin with jet stream support aloft combined to focus the storms.								
Walworth County									
East Troy	**08**	**1525CST**			**0**	**0**			**Hail (1.25)**
Walworth County									
2 NE East Troy	**08**	**1530CST**			**0**	**0**			**Funnel Cloud**
Jefferson County									
Watertown	**08**	**1722CST 1725CST**			**0**	**0**			**Hail (0.75)**
Washington County									
West Bend	**08**	**1820CST**			**0**	**0**	**7K**		**Lightning**
Waukesha County									
3 NE Mukwonago to 3 SE Waukesha	**08**	**1855CST 1903CST**			**0**	**0**			**Hail (1.00)**
Milwaukee County									
Greenfield	**08**	**1857CST**			**0**	**0**			**Hail (1.00)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Milwaukee County									
Milwaukee	**08**	**1900CST**			**0**	**0**	**5K**		**Lightning**
Washington County									
Richfield	**08**	**1930CST**			**0**	**0**	**3K**		**Lightning**
Racine County									
Racine	**08**	**1951CST**			**0**	**0**			**Hail (0.75)**
Walworth County									
Lake Geneva Plyby Ar	**08**	**2020CST 2025CST**			**0**	**0**			**Hail (0.75)**
Racine County									
1 SW Burlington	**08**	**2039CST**			**0**	**0**			**Hail (1.00)**

The second round of scattered severe thunderstorms on May 8th featured large hail stones. In addition, lightning bolts started fires in the roof/attic area of two homes, and struck a power transformer in Milwaukee. There was a brief appearance of a funnel cloud.

Lafayette County									
Benton to Shullsburg	**11**	**0725CST 0734CST**			**0**	**0**	**10K**		**Hail (1.75)**
Lafayette County									
Gratiot	**11**	**0752CST 0757CST**			**0**	**0**	**5K**		**Hail (1.25)**

Two clusters of severe thunderstorms marched through Lafayette County during the early morning hours. Large hail, which accompanied the storms, damaged several vehicles besides shredding tree leaves. Synoptically, low pressure was moving northeast through North Dakota while a cool front trailed down through Minnesota to eastern Iowa. A warm front was found over northern Illinois. This early morning activity set the stage for another longer round of severe weather later in the evening on the 11th into the early morning hours of the 12th.

Iowa County									
Arena	**11**	**2114CST**			**0**	**0**			**Hail (1.00)**
Dodge County									
Reeseville to 4 SE Juneau	**11**	**2213CST 2215CST**			**0**	**0**			**Hail (0.75)**
Jefferson County									
Watertown	**11**	**2220CST**			**0**	**0**	**1K**		**Thunderstorm Wind (G52)**
Washington County									
Allenton to West Bend	**11**	**2225CST 2240CST**			**0**	**0**	**100K**		**Thunderstorm Wind (G65)**
Jefferson County									
3 SE Sullivan	**11**	**2228CST**			**0**	**0**			**Hail (0.75)**
Dane County									
Madison	**11**	**2230CST 2330CST**			**0**	**0**			**Urban/Sml Stream Fld**
Milwaukee County									
Milwaukee	**11**	**2240CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Dane County									
Marshall	**11**	**2243CST 2251CST**			**0**	**0**	**2K**		**Thunderstorm Wind (G52)** [M]
Jefferson County									
Watertown	**11**	**2246CST**			**0**	**0**	**1K**		**Thunderstorm Wind (G56)**
Waukesha County									
Delafield	**11**	**2310CST**			**0**	**0**	**1K**		**Thunderstorm Wind (G52)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Jefferson County									
3 SE Sullivan	**11**	**2325CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
Hartland to Big Bend	**11**	**2328CST 2345CST**			**0**	**0**	**100K**		**Thunderstorm Wind (G65)**
Dane County									
Madison	**11**	**2330CST 2335CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Waukesha County									
Countywide	**11 12**	**2330CST 0100CST**			**0**	**0**			**Urban/Sml Stream Fld**
Milwaukee County									
Milwaukee to Oak Creek	**11 12**	**2343CST 0005CST**			**0**	**0**	**50K**		**Thunderstorm Wind (G65)**
Milwaukee County									
Franklin to Milwaukee	**12**	**0000CST 0100CST**			**0**	**0**			**Urban/Sml Stream Fld**
Racine County									
Union Grove	**12**	**0009CST 0012CST**			**0**	**0**	**5K**		**Hail (1.75)**
Racine County									
Sturtevant to Racine	**12**	**0015CST 0130CST**			**0**	**0**			**Urban/Sml Stream Fld**

A second round of severe weather struck south-central and southeast Wisconsin overnight from the 11th into 12th. Some of the thunderstorms developed supercell characteristic resulting in large damaging hail, downburst straight-line winds, and torrential rainfalls. Nearly all of the severe storms in this round of activity leveled large trees and power lines. The worst damage was reported in the Allentown to West Bend area of Washington County, with two pole sheds and two residential garages sustaining considerable damage. Large hail up to golf ball size also occurred with the hurricane-force winds in Washington County. Milwaukee and Waukesha counties also experienced the same type of damage due to hurricane-force thunderstorm winds. Two Brookfield (Waukesha Co.) homes were damaged when large trees were pushed on them. In Cudahy (Milwaukee Co.), where a trained spotter's wind anemometer was blown away at 70 mph...the still-increasing winds pushed his home slightly off its foundation

Torrential rains coming down at the rate of 1 to 2 inches per hour in the more intense storms resulted in urban flooding as well. Many reports indicated that water was briefly 6 inches to almost 2 feet deep on some low-lying roads or underpasses. A peak rain of 3.6 inches in one hour was reported near the city of Racine! Due to the toppled power lines, about 25,000 customers were without power at one time or another. Synoptically, a warm front, that was over northern Illinois on the 11th, moved into southern Wisconsin during the overnight hours. This front served as a focus for the thunderstorm activity.

Sauk County									
2 NE Reedsburg	**12**	**0705CST**			**0**	**0**			**Hail (0.88)**
Sauk County									
5 W Lake Delton	**12**	**0712CST**			**0**	**0**			**Hail (0.75)**
Marquette County									
6 NNE Westfield to 2.2 E Neshkoro	**12**	**0930CST 0945CST**			**0**	**2**	**1M**		**Hail (3.00)**
Green Lake County									
10 W Berlin to 3 W Berlin	**12**	**0948CST 1000CST**			**0**	**4**	**1.5M**	**300K**	**Hail (2.75)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Fond Du Lac County

3 NE Ripon | **12** | **1005CST** | **0** | **0** | **Hail (1.00)**

Sampling of hail stones from Crystal Lake, Marquette County. Hail stones remained on the ground for 1 hour before retrieval and photograph taken. It is estimated that hail stones were 3 inches in diameter when they fell.

Probably the costliest southern Wisconsin hailstorm in the past 100 years struck the northern parts of Marquette and Green Lake Counties during the mid to late morning hours. This was the third round of severe thunderstorms to strike southern Wisconsin due to the same basic weather pattern. Hailstones the size of baseballs (up to 3 inches in diameter) pounded the northern 3 mile stretch of these two counties, resulting in substantial damage to hundreds of homes (roofs and siding) and hundreds of vehicles. Two people in Marquette County and 4 people in Green Lake County were injured by the large hailstones and needed medical treatment. The hailstones left impact marks on sidewalks in the Crystal Lake area of north-central Marched County. In Green Lake County crop damage was also noted. Downburst winds of 60 to 70 mph also accompanied the hail, resulting in many trees being pushed over.

Interestingly, this severe hailstorm occurred north of a warm front, with air temperatures only in the 60s. The warm front moved north to a Wisconsin Dells to Sheboygan line while a frontal "triple-point" formed near the Dells due to a cool front pushing in from the west. The thunderstorm which first produced hail in Sauk County while moving northeast, gradually turned more to the right (east), as it entered Marquette, Green Lake, and Waushara Counties, and transformed into a high-precipitation supercell. Eventually this supercell did spawn a tornado in Manitowoc County, and 100 mph straight-line winds in Calumet and Manitowoc Counties.

Lafayette County

6.5 SW Belmont | **17** | **1154CST** | **0** | **0** | **Hail (0.75)**

Iowa County

Rewey | **17** | **1300CST** | **0** | **0** | **Hail (1.00)**

Lafayette County

3 NW Belmont | **17** | **1313CST 1318CST** | **0** | **0** | **2K** | **Hail (1.75)**

Green County

6 W Monticello | **17** | **1355CST** | **0** | **0** | **Hail (1.00)**

WISCONSIN, Southeast

Scattered severe thunderstorms developed during the afternoon heat and dumped large hail. Several vehicles sustained light damage near Belmont (Lafayette Co.). The storms were set up by an east-west frontal boundary over northern Illinois extending back to a deep low pressure over Colorado. This situation would lead to several rounds of severe weather and flash flooding across southern Wisconsin during the evening hours of the 17th through the 18th.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
Sauk County									
Baraboo	**17**	**1815CST** **1930CST**			**0**	**0**	**10K**		**Flash Flood**
Sauk County									
Baraboo	**17**	**1822CST**			**0**	**0**	**2K**		**Thunderstorm Wind (G52)**
Columbia County									
3 W Portage to Portage	**17**	**1835CST** **1845CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Dodge County									
1 W Danville	**17**	**1900CST** **2000CST**			**0**	**0**	**20K**		**Flash Flood**
Dodge County									
Randolph	**17**	**1910CST**			**0**	**0**			**Hail (0.75)**
Kenosha County									
Somers	**17**	**2010CST**			**0**	**0**			**Hail (1.00)**
Columbia County									
South Portion	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**50K**		**Flash Flood**
Dodge County									
Juneau to Watertown	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**50K**		**Flash Flood**
Jefferson County									
Watertown	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**25K**		**Flash Flood**
Milwaukee County									
North Portion	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**200K**		**Flash Flood**
Ozaukee County									
Mequon to Port Washington	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**75K**		**Flash Flood**
Washington County									
South Portion	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**75K**		**Flash Flood**
Waukesha County									
Mapleton to New Berlin	**17** **18**	**2015CST** **0100CST**			**0**	**0**	**50K**		**Flash Flood**

The second round of adverse weather on the 17th started off as a large hail and damaging wind event in Sauk County, but quickly changed to a heavy rain and flash flooding event as individual cells became more numerous and clusters moved east/southeast. Training echos were common which led to flash flooding. Damaging straight-line winds toppled large trees in Sauk and Columbia Counties while hail up to 1.00 inch in diameter also fell. However, from then on the storms became prolific rain-producers: Watertown (Jefferson Co.) had 2.52 inches of rain in 1.5 hours, Grafton (Ozaukee Co.) had 1.75 inches in one hour. WSR-88D Doppler radar estimated a total of 3 to 3.8 inches fell from southeast of Portage (Columbia Co.) to the Watertown area from 1800 to 2030CST on the 17th, and 2 to 3 inches east into northern Milwaukee County. About 2000 customers in southeast Wisconsin lost electrical power due to either downed power lines or lightning strikes.

Throughout the areas that experienced flash flooding it was noted that water levels rose to 1 to 3 feet over many roads (urban and rural) leading to numerous reports of gravel shoulder washouts, blocked roads, stranded/damaged vehicles, flooded basements, and clogged sewers. In Brown Deer (Milwaukee Co.) water was up to 4 feet deep on some roads and there were reports of mudslides. Fortunately, there were no injuries or deaths, possibly due to timely warnings.

For the calendar day of May 17th, Milwaukee Mitchell Field (Milwaukee Co.) picked up 1.70 inches of rain, breaking the old record of 1.20 set back in 1889. Madison's Truax Field (Dane Co.) set a new daily record of 2.58 inches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
		On the weather map the Colorado low had moved to eastern Nebraska by the end of the 17th while the west-east frontal boundary had moved north to the Wisconsin/Illinois border. Southern Wisconsin during the time of the flooding had northeast winds and temperatures around 60.							
Kenosha County									
Somers	**18**	**0130CST 0430CST**			**0**	**0**	**200K**	**50K**	**Flash Flood**
Iowa County									
Linden to Dodgeville	**18**	**0533CST 0550CST**			**0**	**0**	**500K**	**100K**	**Hail (2.00)**
Dane County									
Black Earth	**18**	**0630CST**			**0**	**0**			**Hail (0.88)**
Dane County									
Black Earth	**18**	**0630CST 2000CST**			**0**	**0**	**30K**		**Urban/Sml Stream Fld**
Dane County									
Fitchburg	**18**	**0645CST**			**0**	**0**	**150K**		**Thunderstorm Wind (G65)**
Dane County									
Waunakee	**18**	**0700CST 0830CST**			**0**	**0**	**5K**		**Urban/Sml Stream Fld**
Dane County									
Madison to Madison Truax Arpt	**18**	**0702CST 0713CST**			**0**	**0**	**200K**		**Hail (2.00)**
Dane County									
3 S Marshall	**18**	**0730CST**			**0**	**0**			**Hail (1.00)**
Jefferson County									
Lake Mills to 1 N Jefferson	**18**	**0736CST 0742CST**			**0**	**0**			**Hail (1.00)**
Walworth County									
Lyons	**18**	**0747CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
Delafield to Menomonee Falls	**18**	**0806CST 0828CST**			**0**	**0**	**5K**		**Hail (1.25)**
Washington County									
2 S Hartford	**18**	**0811CST**			**0**	**0**			**Hail (1.00)**
Milwaukee County									
West Allis to Milwaukee	**18**	**0815CST 0836CST**			**0**	**0**	**20K**		**Hail (1.75)**
Kenosha County									
3.5 SW Somers	**18**	**0817CST**			**0**	**0**			**Hail (0.75)**
Ozaukee County									
Cedarburg to Grafton	**18**	**0828CST 0830CST**			**0**	**0**	**10K**		**Hail (1.50)**
Waukesha County									
Waukesha	**18**	**0845CST**			**0**	**0**			**Hail (0.75)**
Dane County									
3 N Deerfield	**18**	**0925CST**			**0**	**0**			**Hail (1.00)**
Jefferson County									
4 NW Lake Mills	**18**	**0930CST**			**0**	**0**			**Hail (1.00)**
Waukesha County									
Waukesha	**18**	**1018CST**			**0**	**0**			**Hail (1.00)**
Milwaukee County									
Wauwatosa	**18**	**1028CST**			**0**	**0**			**Hail (0.75)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Walworth County									
Pell Lake	**18**	**1100CST**			**0**	**0**			**Hail (1.00)**
Racine County									
Bohners Lake	**18**	**1114CST**			**0**	**0**			**Hail (1.75)**
Rock County									
3 S Janesville	**18**	**1125CST**			**0**	**0**			**Hail (1.00)**
Walworth County									
2 S Richmond	**18**	**1130CST**			**0**	**0**			**Hail (0.75)**
Kenosha County									
Kenosha	**18**	**1145CST 1150CST**			**0**	**0**			**Hail (0.75)**
Washington County									
Hubertus	**18**	**1240CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
Merton	**18**	**1244CST**			**0**	**0**			**Hail (1.75)**
Walworth County									
East Troy	**18**	**1307CST**			**0**	**0**			**Hail (0.75)**
Waukesha County									
2 NE Mukwonago	**18**	**1315CST**			**0**	**0**			**Hail (1.25)**
Waukesha County									
Waukesha to Brookfield	**18**	**1340CST 1344CST**			**0**	**0**			**Hail (1.00)**
Kenosha County									
Kenosha	**18**	**1350CST**			**0**	**0**	**80K**		**Lightning**
Waukesha County									
Menomonee Falls	**18**	**1350CST**			**0**	**0**			**Hail (0.75)**
Milwaukee County									
North Milwaukee	**18**	**1401CST 1405CST**			**0**	**0**			**Hail (0.75)**
Rock County									
Janesville	**18**	**1655CST**			**0**	**0**	**25K**		**Lightning**

Leftover thunderstorms from the evening of May 17th eventually moved through Kenosha County during the pre-dawn hours on the 18th, and left in their wake flash flooding conditions around Somers. WSR-88D Doppler radar estimated that 2 to 3 inches fell in about 1.5 hours on top of saturated soils. Flood waters quickly reached 2 to 4 feet over roads resulting in gravel shoulder washouts. Eight families had to be evacuated by boat from their mobile homes as a nearby river quickly spilled out of its banks. Many vehicles were stranded in the high water levels, and many homes sustained significant flood damage to landscaping and interior home contents. In the western part of Kenosha County, at New Munster, the Fox River rose above flood stage at 1230CST on the 18th, crested at 12.31 feet on May 20th, and remained above the 10 foot flood stage into June, 2000. Up river at Pewaukee in Waukesha Co., the Fox River rose above flood stage on May 19th at 0000CST, crested at 11.71 feet on May 20th, and went below flood stage of 10 feet on May 22nd. Other mainstem rivers in southeast Wisconsin also went .5 to 1.5 feet above flood stage due to the heavy rains of May 17-18.

The flash flooding over Kenosha County was a prelude to another series of severe thunderstorms that pounded south-central and southeast Wisconsin with damaging straight-line winds and large, damaging hail. Normally this part of Wisconsin doesn't experience so many thunderstorms that dump large hail. A supercell thunderstorm moved east/northeast across Iowa County. Hailstones up to 2.00 inches in diameter pelted and damaged many vehicles and home sidings, while stripping some of the corn and soybean crops. This storm then headed east into Dane County where it unleashed damaging straight-line winds in addition to large hail. Winds were estimated to reach hurricane-force level as the storm tore through Fitchburg where a home's garage was blown over. The storm then hit Madison with powerful winds and golfball size hail. A Madison home's roof was torn off by the winds, and many large trees were felled. At least 200 vehicles sustained moderate to severe hail damage in Dane County. Torrential rains dumped 1 to 2 inches of rain that resulted in urban flooding in Waunakee (Dane Co.). Milwaukee Mitchell Field set a new 24-hour rainfall record for May 18th with 1.53 inches, breaking the old record of .88 inches set back in 1968. Likewise, Madison Truax Field set a new record of 2.09 inches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

After pounding Dane County the cluster of severe storms moved east all the way east to Lake Michigan by late morning, dumping large hail 1 to 2 inches in diameter in scattered locations. Once again, many vehicles were dented by the large hail. In fact, as in the Madison area, the ground was covered white by the hailstones in the Cedarburg/Grafton (Ozaukee Co.) and Kenosha (Kenosha Co.) area. The Black Earth Creek flooded after a 2-day rainfall of 6 to 8 inches over northwest Dane County. Soil erosion and minor damage to residential landscaping, including basement flooding, was noted along the stretch of this creek from Mazomanie to Black Earth to Cross Plains.

Lightning strikes and tree branches brushing power lines left about 7000 customers over southeast Wisconsin without electrical power on the 18th. Additional scattered severe thunderstorms developed during the afternoon hours and dumped large hail stones as the Nebraska low which moved into eastern Iowa during the morning hours moved to northern Illinois by late afternoon. Southeast o the low air temperatures were in the 80s and surface dewpoints were in the 70s.

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

24		**1400CST 1800CST**			**0**	**0**	**3K**		**Strong Winds**

Strong gradient winds of 20 to 30 mph (17 to 26 knots) with gusts to 40 to 55 mph (35 to 48 knots) lasted for several hours across all of south-central and southeast Wisconsin. There were many reports of broken tree limbs (2 to 4 inches in diameter), especially in Jefferson, Waukesha, and Milwaukee Counties. Some vehicles in Milwaukee were scratched or dented by the branches. A peak wind gust of 55 mph was recorded at the Milwaukee/Sullivan WFO in east-central Jefferson County. Gusts of 50 to 55 mph were noted in the counties of Washington, Iowa, Dodge, Milwaukee, Marquette, and Walworth.

Synoptically, deep low pressure over Ontario, Canada and high pressure over Montana set up a tight surface pressure gradient across Wisconsin. Daytime heating allowed west winds to mix to about 9000 feet AGL. Aloft, jet stream winds of 100 to 120 knots were noted.

Green County									
Countywide	**31**	**2030CST 2359CST**			**0**	**0**	**100K**	**100K**	**Flash Flood**
Lafayette County									
South Portion	**31**	**2030CST 2359CST**			**0**	**0**	**50K**	**50K**	**Flash Flood**
Lafayette County									
2 W Darlington	**31**	**2040CST**			**0**	**0**			**Hail (0.75)**

An isolated severe thunderstorm, dumped large hail in Lafayette County. However, several additional clusters of thunderstorms trained east/southeast across Lafayette and Green Counties, resulting in flash flooding. Many roads in these counties were covered with fast flowing water 1 to 3 feet deep that washed out gravel road shoulders. Also, many homes had basement flooding, and there were many reports of stranded vehicles which sustained flood damage. Both coop rain observations and WSR-88D Doppler radar estimated placed rainfall amounts generally in the 3 to 5 inch range during the evening hours. Browntown, in southwest Green County, picked up 5.5 inches while New Glarus registered 4.0 inches.

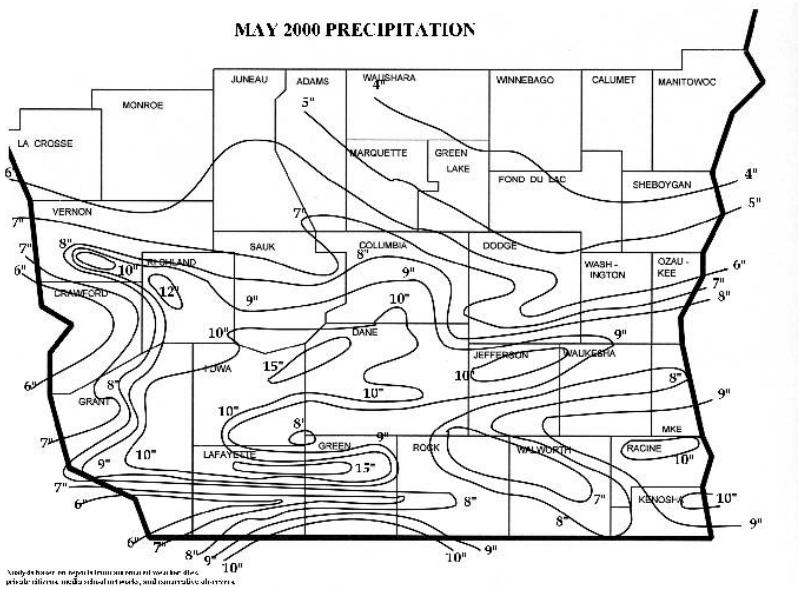
Synoptically, a low pressure moved east along a quasi-stationary front over northern Illinois on th 31st. Meanwhile, moisture south of the front was pulled northward to fuel the storms.

WIZ056>057-062>065-067>069-071>072 **Sauk - Columbia - Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Rock - Racine - Kenosha**

	31	**2300CST 2359CST**			**0**	**0**			**Record Rainfall**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast



May 2000 precipitation totals across southern Wisconsin. Analysis based on reports from automated weather sites, private citizens, media school neetworks, and cooperative observers. Analysis was smoothed out in some locations due to extreme variability of convective rainfall amounts.

New all-time May rainfall records were set in several counties across south-central and southeast Wisconsin thanks to numerous rounds of thunderstorms with heavy rains during May, 2000. Madison Truax Field registered 9.63 inches, breaking the old record of 9.35 inches set in 1933. Milwaukee Mitchell Field recorded 8.42 inches, which is the 3rd wettest May (record is 9.56 inches set in 1933). Monthly rainfall, of 12 inches or more, was measured in a band that stretched from west-central Iowa County to north-central Dane County. Near Black Earth an incredible 18.0 inches was measured for the month! The State of Wisconsin all-time monthly rainfall record is 18.10 inches at Markesan (Green Lake Co.) set in September, 1986. Another band of 12 inches or more stretched across northern Lafayette County to northeast Green County. Within this band, near the village of Argyle, 17.13 inches was collected! In Jefferson County northeast of Lake Mills, 13.50 inches fell out of the skies. Otherwise, 10 to 11 inches were noted over small portions of Sauk, Columbia, Waukesha, Racine, and Kenosha Counties during May, 2000. Over the remainder of south-central and southeast Wisconsin nearly everyone registered 8 to 9 inches for the month, except for Marquette, Green Lake, Fond du Lac, and Sheboygan where 4 to 7 inches fell.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Green County									
Countywide	**01**	**0000CST 1000CST**			**0**	**0**	**100K**		**Urban/Sml Stream Fld**
WIZ063	**Dane**								
	01	**0000CST 2359CST**			**0**	**0**			**Record Rainfall**
Dane County									
Mazomanie to Marshall	**01**	**0100CST 0900CST**			**0**	**0**	**25K**		**Urban/Sml Stream Fld**
Dane County									
Madison	**01**	**0200CST**			**0**	**0**			**Hail (1.00)**
Dane County									
Madison	**01**	**0200CST**			**0**	**0**	**5K**		**Lightning**
Iowa County									
North Portion	**01**	**0200CST 0630CST**			**0**	**0**	**583K**	**2M**	**Flash Flood**
Jefferson County									
Ft Atkinson	**01**	**0430CST**			**0**	**0**	**30K**		**Lightning**
Jefferson County									
Lake Mills	**01**	**0850CST**			**0**	**0**			**Hail (0.75)**
Marquette County									
Briggsville to Westfield	**01**	**1530CST 1830CST**			**0**	**0**	**10K**		**Urban/Sml Stream Fld**
Marquette County									
Briggsville	**01**	**1547CST 1600CST**			**0**	**0**	**40K**		**Thunderstorm Wind (G70)**
Marquette County									
Packwaukee	**01**	**1600CST**			**0**	**0**			**Funnel Cloud**
Sauk County									
Reedsburg to Baraboo	**01**	**1604CST 1610CST**			**0**	**0**	**5K**		**Thunderstorm Wind (G56)**
Sauk County									
Countywide	**01**	**1615CST 2000CST**			**0**	**0**	**9.3M**	**3.5M**	**Flash Flood**
Columbia County									
Countywide	**01**	**1620CST 2000CST**			**0**	**0**	**96.8K**	**1.5M**	**Flash Flood**
Columbia County									
Portage to 7 NE Portage	**01**	**1620CST 1630CST**			**0**	**0**	**30K**		**Thunderstorm Wind**
Green Lake County									
Kingston	**01**	**1633CST**			**0**	**0**			**Hail (0.75)**
Iowa County									
3 SE Highland	**01**	**1636CST**			**0**	**0**			**Funnel Cloud**
Columbia County									
Lodi	**01**	**1640CST**			**0**	**0**			**Hail (1.25)**
Sauk County									
Prairie Du Sac	**01**	**1640CST**			**0**	**0**	**10K**		**Thunderstorm Wind**
Dodge County									
Fox Lake	**01**	**1644CST**			**0**	**0**	**2K**		**Hail (1.50)**
Green Lake County									
Markesan	**01**	**1655CST**			**0**	**0**	**2K**		**Thunderstorm Wind**

National Weather Service
Storm Data and Unusual Weather Phenomena

June 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Fond Du Lac County									
Fond Du Lac	**01**	**1700CST 1900CST**			**0**	**0**	**3K**		**Urban/Sml Stream Fld**
Iowa County									
North Portion	**01**	**1700CST 2000CST**			**0**	**0**	**200K**	**1.6M**	**Flash Flood**
Lafayette County									
5 E Belmont	**01**	**1700CST**			**0**	**0**	**15K**		**Thunderstorm Wind**
Lafayette County									
1.9 NNW Calamine to 1.8 N Calamine	**01**	**1702CST 1703CST**	**0.5**	**75**	**0**	**0**	**100K**		**Tornado (F1)**
Dodge County									
4 S Horicon to 4.5 SE Herman Center	**01**	**1706CST 1725CST**	**14.9**	**125**	**0**	**0**	**1.1M**	**400K**	**Tornado (F2)**
Dodge County									
Horicon to 5 S Mayville	**01**	**1709CST 1716CST**			**0**	**0**	**3K**		**Hail (1.25)**
Fond Du Lac County									
1 SE Oak Center	**01**	**1715CST**	**0.1**	**25**	**0**	**0**		**5K**	**Tornado (F0)**
Iowa County									
2 E Barneveld	**01**	**1717CST**			**0**	**0**			**Funnel Cloud**
Jefferson County									
2 S Lake Mills	**01**	**1717CST**			**0**	**0**			**Funnel Cloud**
Fond Du Lac County									
3 W Fond Du Lac	**01**	**1720CST**			**0**	**0**			**Hail (0.75)**
Washington County									
4 SW Allenton to 2.4 NW St Lawrence	**01**	**1725CST 1728CST**	**1.5**	**50**	**0**	**0**		**100K**	**Tornado (F0)**
Dane County									
Madison to Cottage Grove	**01**	**1732CST 1741CST**			**0**	**0**	**200K**		**Thunderstorm Wind (G61)**
Washington County									
Germantown	**01**	**1754CST**			**0**	**0**			**Hail (1.00)**
Dodge County									
1 S Rubicon	**01**	**1800CST 2000CST**			**0**	**0**	**15K**		**Flash Flood**
Fond Du Lac County									
Waupun	**01**	**1800CST 2000CST**			**0**	**0**			**Urban/Sml Stream Fld**
Green County									
Countywide	**01**	**1800CST 1825CST**			**0**	**0**	**20K**		**Thunderstorm Wind**
Lafayette County									
South Wayne	**01**	**1800CST**			**0**	**0**	**3K**		**Lightning**
Dane County									
Countywide	**01**	**1805CST 2100CST**			**0**	**0**	**6.0M**	**5M**	**Flash Flood**
Green County									
Countywide	**01**	**1805CST 2100CST**			**0**	**0**	**400K**	**1.2M**	**Flash Flood**
Dane County									
Monona	**01**	**1810CST**			**0**	**0**	**20K**		**Thunderstorm Wind**

WISCONSIN, Southeast

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
Jefferson County									
Lake Mills	**01**	**1813CST**			**0**	**0**	**2K**		**Thunderstorm Wind (G52)**
Jefferson County									
Lake Mills	**01**	**1815CST**			**0**	**0**	**3K**		**Lightning**
Rock County									
Milton	**01**	**1815CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Sheboygan County									
Beechwood to Cedar Grove	**01**	**1815CST 1830CST**			**0**	**0**	**5K**		**Thunderstorm Wind**
Jefferson County									
5 SW Ft Atkinson	**01**	**1820CST**			**0**	**0**	**3K**		**Thunderstorm Wind**
Waukesha County									
Genesee	**01**	**1834CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Milwaukee County									
Milwaukee	**01**	**1845CST**			**0**	**0**			**Hail (0.75)**
Rock County									
Countywide	**01**	**1845CST**			**0**	**0**	**300K**	**4M**	**Flash Flood**
Rock County									
Evansville	**01**	**1846CST**			**0**	**0**	**3K**		**Thunderstorm Wind**
Jefferson County									
Countywide	**01**	**1900CST 2200CST**			**0**	**0**	**150K**	**1M**	**Flash Flood**
Kenosha County									
Countywide	**01**	**1900CST 2300CST**			**0**	**0**	**1.5M**	**4M**	**Flash Flood**
Milwaukee County									
Fox Pt	**01**	**1900CST 2100CST**			**0**	**0**	**50K**		**Flash Flood**
Washington County									
5 S Hartford	**01**	**1900CST 2100CST**			**0**	**0**	**25K**		**Flash Flood**
Walworth County									
Genoa City	**01**	**1930CST**			**0**	**0**	**50K**		**Thunderstorm Wind**

One would be hard pressed to find another day like June 1, 2000 in terms of depth and range of severe, convective weather events across south-central and southeast Wisconsin. Tornadoes, widespread and localized flash flooding, funnel clouds, damaging hurricane-force, straight-line winds associated with a wicked squall-line, large hail stones, urban/small flooding, lightning strikes, and significant mainstem river flooding were reported. As in the preceding weeks, a quasi-stationary front over northern Illinois served as a boundary for warm, moist, unstable air to be pulled north over the cooler air over Wisconsin. Leftover flooding (from the evening of May 31, 2000) and isolated severe thunderstorms were noted during the pre-dawn to mid morning hours. However a powerful squall-line formed along the Mississippi River in the La Crosse area by mid-afternoon, and pushed into south-central Wisconsin by late afternoon with "all hell breaking loose." After the squall line moved into the southeast part of the state, it was followed by widespread showers and thunderstorms that triggered additional flooding problems. The east/southeast moving storms would not end until around 2300CST. As a result of the wild weather events, a State of Emergency was declared in Columbia, Dane, Dodge, Green, Iowa, Lafayette, Rock, and Sauk counties. Numerous power lines were knocked down by felled trees or wind gusts outright, resulting in the lose of power to 20,000 customers. Significant storm and flooding events will be summarized below county by county.

Marquette Co: 6 homes were damaged and trees uprooted by powerful winds estimated at 70 knots (80 mph) in Briggsville. Urban flooding in Briggsville was also noted with water 6 inches deep

Green Lake Co: powerful winds knocked down trees in both Kingston and Markesan, and large hail was noted.

Fond du Lac Co: a brief, F0 tornado spun up in the rural area southeast of Oak Center. Only some hay crop was damaged. Elsewhere, urban flooding and large hail was noted. Between 1700 and 1900CST, 1.71 inches of rain fell in the city of Fond du Lac

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Sheboygan Co: powerful thunderstorm winds pushed over trees in the southern portions.

Sauk Co: powerful winds blew over large trees in the Reedsburg to Baraboo area as well as around Prairie du Sac. Then the heavens oped up as 3.75 inches of rain fell between 1600 and 1645CST in North Freedom. There were other reports of up to 6 inches of rain falling in 2 hours. Flash flooding developed along Narrows Creek which left mud marks 8 feet high on some buildings. So much water came down Narrows Creek that it temporarily backed up the water of the Baraboo River! The Baraboo River flooded homes, and other creeks tore pieces of Highways 12 and 113 away. Road beds and parking lots were ripped away on the south side of Baraboo. Some railroad beds and many drainage culverts across the county were washed away. Severe erosion was noted on the cliffs overlooking the north shore of Devils Lake, whose water level rose about 3 feet due to runoff. All together, 153 residential homes were damaged, 17 businesses reported water damage, and 220,000 acres of farm land sustained water or erosion damage. The flooding was more widespread and worse than the 1993 flood, based on newspaper accounts. The Baraboo River near Baraboo crested at 22.04 feet on June 2nd, or 6.04 feet above flood stage (moderate flooding), after rising above flood stage at 0400CST on the 1st. Upriver at Rock Springs, the flood stage of 18.5 feet was exceeded at 1630CST on the 1st, and the crest was 21.71 feet at 0750CST on the 2nd (major flooding).

Columbia Co: powerful winds uprooted large trees in and around Portage. In addition, a garage was damaged, several vehicles were blown into roadside ditches quickly reached a depth of 1 to 3 feet over portions of Highway 12 around Portage, and on Highway 73 in the southeast corner where residents were evacuated. Gravel road shoulder and culvert washouts were reported on some roads. Agricultural crop damage and soil erosion were also noted

Dodge Co: the main event was a long-lived tornado that spun up just south of Highway S about 4 miles south of Horicon, just southwest of the intersection of Highways S and E. Eyewitness accounts suggested that this tornado was a rain-wrapped and multi-vortex as it hopped-skipped east/southeast through the heart of the village of Iron Ridge (F2 at this time, 140-50 mph wind), before exiting the county on Highway S. All together, this F2 tornado destroyed 6 homes, and damaged 26 other homes, 6 businesses, 2 barns, 1 silo, semi-tractor trailer, a green house, and many cars. It destroyed 5 agricultural buildings. No one was injured or killed by this early-warned tornado. Five other barns were damaged in the county by the powerful straight-line winds associated with the squall-line. In addition, large hail up to walnut size was noted. Flash flooding was reported in the southeast part of the county when 1.5 inches of rain fell in a short period of time. Soil erosion and shoulder washouts were reported near the intersection of Highways 60 and P, south of Rubicon.

Washington Co: the Dodge County tornado continued into Washington County for about 1.5 miles near and along Highway S. It damaged a barn and silo and uprooted more trees before dissipating. The tornado in this county had winds estimated at 80 mph, or F1 strength. No one was injured or killed. Flash flooding was reported south of Hartford where soil erosion and gravel shoulder washouts occurred due to swirling flood waters. Otherwise, large hail and tree-uprooting winds were noted in Germantown

Iowa Co: Pre-dawn flash flooding occurred across the northern portion of Iowa County due to leftover thunderstorms that hit the county on May 31st. Morrey Creek overflowed it banks in the village of Avoca, damaging 35 homes and eroding surrounding landscaping. In Dodge State Park near Dodgeville, 50 miles of trails were closed after several bridges were washed out by flooding waters. In addition, gravel road shoulder and culvert washouts were noted on several roads. Another round of flash flooding occurred across the northern portion of the county thanks to torrential rains of 2 to 4 inches in 1 to 2 hours in the late afternoon and early evening hours. An estimated 10,250 acres sustained major soil erosion and many roads had water depths of 1 to 3 feet as water currents washed away gravel shoulders. Crop damage was extensive.

Dane Co: pre-dawn severe storms dumped large hail and knocked down many tree limbs in the Madison area. During the same storm, lightning struck a west-side Madison hotel, resulting in damage to its electrical system. Urban/small stream flooding was noted in the pre-dawn hours across the northern part of the county with water covering low spots on Highways 12, 73, and 113. A couple streets were flooded and closed in the village of Mazomanie due to high water levels on the Black Earth Creek. Sandbagging was needed to protect about a dozen homes in Mazomanie. Powerful thunderstorm winds uprooted trees which then damaged many vehicles in the Madison to Cottage Grove area during the evening. At least 60 trees blocked various roads in the Madison area, and 18 power lines were reported down. Roof tiles were also removed from some homes as the winds gusted to an estimated 70 knots (80 mph). An expensive gazebo was destroyed by uprooted trees in the city of Monona. Shortly thereafter, flash-flood producing rains hit much of the county. Madison streets were rivers as 27 cars were stranded or pushed around. It was the worst flooding the city during the past 15 years. Sandbagging commenced in Monona to protect homes. Many roads across the county were damaged by flood waters, with most damage in the northwest part of the county. In the village of Oregon, 1.90 inches of rain was measured in just 45 minutes ending at 1830CST. Additional soil erosion and ponding of water resulted in extensive, severe crop damage across the county. Collectively, wind and/or flood damage occurred to at least 646 residential homes in the county, and to 3 businesses. Probably 30,000 acres of farm land had significant crop damage. A new daily rainfall record of 3.46 inches was set at Madison's Traux Field, breaking the old record of 1.33 inches set back in 1892. Runoff from this rainfall eventually pushed Lake Mendota to 31.5 inches above its normal summer level on June 5th, which was the highest reading since the beginning of records in 1916. In response to the high lake levels in Dane county, many nearby homes were sandbagged, and public beach and boat docks were closed.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Jefferson Co: an early morning, severe thunderstorm dumped large hail on Lake Mills. Another storm's lightning struck a Ft. Atkinson church steeple, resulting in structural and water damage. The evening storms generated damaging winds that uprooted large trees. Lightning started a minor fire on a Lake Mills home's roof. Heavy rains of 2 to 3 inches during the evening generated scattered flash flooding across the county, mostly in the form of gravel shoulder washouts of several roads. Roads near the Rock River in Ft. Atkinson were closed due to the swirling waters. Soil erosion and crop washouts were noted across the county. Rainfall totals of 2.39 inches and 2.72 inches were noted in Ft. Atkinson and Jefferson, respectively. The heavy rains forced the Crawfish River at Milford to exceed the flood stage of 7 feet on June 2nd , and crest at 8.38 feet on June 7th (moderate flooding).

Waukesha Co: powerful thunderstorm winds uprooted trees in the Genesee area.

Milwaukee Co: large hail was reported in the city of Milwaukee. Torrential rains of around 2 inches in 1 to 2 hours in the city of Fox Point resulted in flash flooding in that city. Landscaping damage and some road damage was noted due to swift water currents.

Lafayette Co: a brief tornado occurred north of Calamine. It damaged 2 large pole sheds and uprooted many trees along its short path. Several calves were injured as they were pushed across the road. Eyewitness accounts suggest this F1 tornado (winds about 100 mph) was rain-wrapped. Otherwise, the squall line's powerful winds uprooted trees and over-turned a car-trailer combo east of Belmont. Similar to other counties, flash-flood producing rains followed the winds. Across the county, all mainstem river, stream, creeks, and other low spots experienced flash flooding. Bridge under-cutting was noted on Highway K outside of Gratiot, on Highway H in Jenkynsville, and Highway G in the northwest corner. Moderate to severe damage to road shoulders and washed out driveways was noted countywide. Twenty-one roads were closed at one time or another. At least 75 residential homes and 5 businesses reported flood damage, while 2 private utility buildings suffered damage. Two farm buildings were destroyed by the flood waters, and 15 others damaged. About 7000 acres of farm land were severely damaged. The Pecatonica River in Darlington closed down Highway 23 from the south. The river at this location exceeded the flood stage of 11 feet late on May 31st, and crested at 15.77 feet at 0730CST on June 1st (moderate flooding). Near South Wayne, lightning started a minor house fire.

Green Co: pre-dawn and morning urban/small stream flooding occurred countywide due to rainfall that started on May 31st. The rains ended by sunrise. Up to 5 inches of rain fell overnight in the southwest part of the county. Many streams were 5 to 10 feet wide, resulting in water covering low-lying roads to a depth of 1 foot. Several cars were swept into roadside ditches. Urban basements had minor flood damage. Additional heavy rains followed the evening squall line which resulted in a new round of flash flooding across much of the county. Eight miles of the 24 mile long Sugar River State Trail were closed from near Monticello to near Albany due to washed out bridges and undercut paths. Five homes sustained significant damage. Numerous roads were closed due to high water levels and dozens of vehicles were stranded or pushed into roadside ditches. Gravel road shoulder and culvert washouts were noted countywide. Water levels in the city of Brodhead were the highest in many years. Legion Park in Albany was closed after the adjacent Sugar River exceeded flood stage. Moderate to severe soil erosion was noted to 5000 acres of farm fields. The Pecatonica River at Martintown exceeded the flood stage of 13.5 feet at 0000CST on June 1st, and crested at 18.51 feet on June 4th (moderate flooding).

Rock Co: powerful thunderstorm winds downed large trees in scattered parts of the county. However, flash-flood producing rains hit during the evening hours. Most mainstem and nearly all streams and creeks jumped their banks. Nine roads along Lake Koshkonong sustained washout damage due to swift water currents. At least 100 homes outside of the major cities sustained damage. Many Beloit and Janesville homes in low spots reported landscape flood damage as well as basement flooding. Flash flood waters also tore through farm fields, leaving moderate to severe soil erosion and crop damage to at least 20,000 acres. Flood waters from the Sugar River in the southwest corner of the county closed roads west of the village of Avon

Walworth Co: no damage reports.

Kenosha Co: several rounds of heavy rains during the evening on top of previously saturated soils and high river levels resulted in flash flooding scattered across the county. Several roads had fast-flowing waters 1 to 3 feet deep which resulted in shoulder washouts and cars being swept into roadside ditches. At least 75 homes sustained significant flood damage in the Wheatland, Salem, and Silver Lake areas. About 47,000 acres of farm land had serious soil erosion, and washed or flooded crops. Due to rainfall totals during the evening of 2 to 3 inches, the Fox River at New Munster continued to rise and would eventually crest at 12.76 feet early on June 3rd, or 2.76 feet above flood stage. Three homes Silver Lake homes were evacuated.

Lafayette County					
Argyle	**10**	**1450CST**	**0**	**0**	**Funnel Cloud**
Rock County					
Janesville	**10**	**1500CST**	**0**	**0**	**Funnel Cloud**
Green County					
Brodhead	**11**	**1514CST**	**0**	**0**	**Funnel Cloud**

Scattered convection both days resulted in isolated funnel cloud reports.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Dane County									
Countywide	**12**	**1000CST 1400CST**			**0**	**0**	**30K**		**Urban/Sml Stream Fld**
Racine County									
Sturtevant	**12**	**1100CST 1300CST**			**0**	**0**	**5K**		**Urban/Sml Stream Fld**
Kenosha County									
Countywide	**12**	**1130CST 1600CST**			**0**	**0**	**4.1M**	**8.4M**	**Flash Flood**

Several rounds of thunderstorms moved west to east across the same locations and dumped enough rain to cause flash flooding in the city of Kenosha (Kenosha County). Newspaper accounts indicated that 3 to 6 inches of rain fell across Kenosha County, with a measured 3.84 inches at the Kenosha Airport. Roughly 100 roads were closed due to water depths of 2 to 5 feet in low spots, especially in the cities of Kenosha, Somers, and Bristol. The flooding in the city of Kenosha was described as the worst in 15 years, and numerous homes and businesses reported varying degrees of damage to contents, and landscaping. Overall, hundreds of basements and numerous municipal pools were flooded. Many roads sustained gravel shoulder washouts, and many vehicles were floating the swirling flood waters. Motorists were rescued from at least 130 vehicles. About a dozen homes were evacuated in the cities of Pleasant Prairie and Somers. Near Powers Lakes an earthen berm gave way, allowing water to flood several roads. Needless to say, extensive crop damage in the millions of dollars was noted as flood waters flooded low spots, eroded slopes, or simply washed crops away.

Elsewhere, urban/small stream flooding occurred n and near the city of Sturtevant (Racine Co.), and at scattered locations across Dane County. Two to 4 inches of rain fell over parts of Dane County, resulting in the evacuation of at least 2 dozen homes, and the closure of about 100 intersections in Madison and surrounding cities. Minor flood damage was noted in some basements, and officials had to clean up flood debris from low spots and intersections. In and around Sturtevant, water was reported to be 6 inches deep on roads, and roadside ditches were full.

Walworth County									
Walworth to Fontana	**13**	**1530CST 1700CST**			**0**	**0**	**850K**	**500K**	**Flash Flood**
Dane County									
Central Portion	**13**	**1610CST 1930CST**			**0**	**0**	**1.3M**	**1M**	**Flash Flood**
Iowa County									
Avoca	**13**	**1700CST 1900CST**			**0**	**0**			**Urban/Sml Stream Fld**
Walworth County									
Lake Geneva to Genoa City	**13**	**1730CST 2200CST**			**0**	**4**	**350K**	**300K**	**Flash Flood**
Kenosha County									
Powers Lake	**13**	**1740CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Walworth County									
La Grange to Elkhorn	**13**	**1745CST 1800CST**			**0**	**0**	**25K**		**Thunderstorm Wind**
Kenosha County									
Powers Lake to Silver Lake	**13**	**1800CST 1810CST**			**0**	**0**	**5K**		**Thunderstorm Wind**
Dane County									
Madison Truax Arpt	**14**	**0600CST**			**0**	**0**			**Heavy Rain**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Sauk County

Baraboo **14** **2359CST** **0** **0** **Heavy Rain**

Flash flooding and scattered severe thunderstorms struck parts of south-central and southeast Wisconsin during the afternoon and evening hours. Several clusters of showers and thunderstorms moved east/northeast at 35 to 40 mph across the area. Synoptically, a warm front stalled over northern Illinois with an axis of instability extending north into southern Wisconsin. A short-wave trough aloft moved east through the region. South of the surface front the dewpoints were in the 70s. Here is a break down by county.

Walworth Co: this county was hit hard with two periods of heavy rains which resulted in flash flooding. Lake Petite, just south of Fontana, overflowed into a retention basin near a residential subdivision. Residents were evacuated in the late afternoon as the retention basin filled up. Nearby in the village of Walworth, hundreds of residents were evacuated after water rose to a depth of 4 feet on local roads. Washouts of gravel road shoulders were noted around the villages of Walworth and Fontana, as well as agricultural land erosion and crop damage. During the evening hours the heavy rains created flash flood conditions over the southeast part of the county from around Lake Geneva to Genoa City. Some residents were evacuated and additional washouts of gravel shoulders were reported. The Nippersink Creek which flows through Genoa City reach a depth of 10 feet, when normally it is only 1 foot deep! All together in Walworth County, 4 people were injured by flood debris, 10 people were left homeless, 57 homes and 4 businesses sustained flood damage, and 5000 acres of agricultural land were severely damaged to the tune of $800,000. Roughly half of the property damage was attributed to loses in the public sector and the other half in the private/business sector. Otherwise, powerful thunderstorm winds uprooted trees from La Grange to Elkhorn, and blew over a semi-tractor trailer unit on Interstate 43 near Elkhorn.

Dane Co: heavy rains hit the Madison and Middleton areas once again, resulting in rivers and streams quickly exceeding flood stage. Between 1500 and 1600CST, the city of Middleton picked up 1.90 inches of rain. As a result, mudslides occurred on High Point Road, where the mud was 4 inches deep. Flood damage to landscaping of nearby homes was also noted, as well as gravel shoulder washouts on nearby roads. The Yahara River running through the Madison area was reported to be rising quickly, and was 10 feet beyond its normal bank on both sides. Nearby homes once again suffered another round of landscape erosion and basement flooding, and sandbagging continued. As was the case earlier in June, agricultural land surrounding the Madison metro area suffered another round of moderate to severe soil erosion and associated crop damage.

Kenosha Co: 2 rounds of powerful thunderstorm winds uprooted large trees in the southwest part of the county.

The heavy rain event listed above for Dane County represents the 15.27 inches of rain that fell at Madison Truax Field (Dane Co.) the past 30 days ending at 0600CST on June 14th. This was the greatest any 30-day total in the past 50 years. On the following day, June 15th, Lake Mendota and Lake Monona rose to their 2nd highest levels ever, 30 and 27 inches above normal summer levels, respectively. The heavy rain event listed above for Sauk County represents a 15 inch rainfall total for the period of June 1-14 somewhere in the county. The exact location wasn't specified in a newspaper article. It may be a Wisconsin state record for a 2-week period.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ052-057>058-062>063-067>068 — **Sheboygan - Columbia - Dodge - Iowa - Dane - Lafayette - Green**

16	**0000CST 0700CST**	**0**	**0**	**29K**			**Strong Winds**

Low pressure passing northwest to north of the southern part of Wisconsin set up a strong gradient wind situation across southern Wisconsin. South to southwest surface winds frequently gusted to 30 to 39 knots (35 to 45 mph) for many hours, resulting in numerous reports of downed tree limbs and in some cases, small trees. Several road barricade were knocked over. The Milwaukee/Sullivan (east-central Jefferson Co.) WSR-88D Doppler radar VAD wind profile indicated 60 knot (69 mph) winds 2 thousand feet above the ground during this strong wind episode.

Dodge County

5 NW Fox Lake	**28**	**1720CST**	**0**	**0**			**Hail (0.75)**

An isolated severe thunderstorm produced large hail stones. A cooler, northwest flow aloft existed.

Jefferson County

2 SE Ft Atkinson to 3 SW Ft Atkinson	**30**	**1338CST 1350CST**	**0**	**0**			**Hail (0.88)**

Rock County

5 E Milton	**30**	**1445CST**	**0**	**0**			**Hail (0.75)**

Walworth County

Tibbet	**30**	**1450CST**	**0**	**0**			**Hail (0.75)**

Walworth County

4 NNW Darien	**30**	**1615CST**	**0**	**0**			**Hail (0.75)**

Walworth County

Darien	**30**	**1635CST**	**0**	**0**			**Hail (1.00)**

Severe thunderstorms developed along an east-west orientated outflow boundary associated with earlier convection which moved east along the Illinois/Wisconsin border. The genesis region, initially over southwest Jefferson County, eventually shifted to west-central Walworth County. New cells displayed a back-building tendency toward the western Walworth County line. Slow movement of the storms led to torrential downpours of 1 to 2 inches in a 1 hour period. There were reports of standing water in low spots on farms in the western part of Walworth County. Otherwise, large hail stones were the only severe weather event.

WISCONSIN, Southeast

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WIZ066	**Milwaukee**								
	02	**0000CST** **2359CST**			**0**	**0**			**Record Rainfall**
Dodge County									
5 S Danville	**02**	**1555CST**			**0**	**0**			**Hail (1.00)**
Jefferson County									
Johnson Creek	**02**	**1629CST** **1635CST**			**0**	**0**	**50K**	**100K**	**Hail (1.75)**
Jefferson County									
Sullivan	**02**	**1645CST** **1800CST**			**0**	**0**			**Urban/Sml Stream Fld**
Jefferson County									
Rome to 3.7 SE Sullivan	**02**	**1655CST** **1700CST**			**0**	**0**	**75K**	**100K**	**Hail (2.25)**
Waukesha County									
Waukesha to Brookfield	**02**	**1655CST** **1705CST**			**0**	**0**	**100K**		**Thunderstorm Wind (G68)** [M]
Milwaukee County									
Countywide	**02**	**1700CST** **1800CST**			**0**	**0**			**Urban/Sml Stream Fld**
Racine County									
Racine	**02**	**1700CST** **1800CST**			**0**	**0**			**Urban/Sml Stream Fld**
Waukesha County									
Mukwonago to Brookfield	**02**	**1700CST** **1800CST**			**0**	**0**			**Urban/Sml Stream Fld**
Waukesha County									
2 S Dousman to North Prairie	**02**	**1710CST** **1712CST**			**0**	**0**	**150K**		**Thunderstorm Wind (G61)** [M]
Milwaukee County									
5.4 SW Milwaukee Mtch 7 SSE Milwaukee Mtchell Ar	**02**	**1730CST** **1806CST**	**6.6**	**100**	**0**	**0**	**1.5M**		**Tornado (F1)**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Waukesha County									
Brookfield to New Berlin	**02**	**1740CST 1745CST**			**0**	**0**	**200K**		**Thunderstorm Wind**
Racine County									
Caledonia to Racine	**02**	**1750CST 1800CST**			**0**	**0**	**200K**		**Thunderstorm Wind**
Racine County									
2.8 NNW Husher to 2.9 NNW Husher	**02**	**1806CST**	**0.2**	**30**	**0**	**0**	**10K**		**Tornado (F0)**
Racine County									
5 NW Racine to Racine	**02**	**1821CST 1845CST**			**0**	**0**	**150K**		**Thunderstorm Wind**
Dodge County									
2 N Beaver Dam to 2 S Horicon	**02**	**1840CST 1850CST**			**0**	**0**	**10K**		**Thunderstorm Wind**
Dane County									
Madison	**02**	**1900CST**			**0**	**0**	**10K**		**Thunderstorm Wind**
Dane County									
Madison	**02**	**1900CST 2000CST**			**0**	**0**			**Urban/Sml Stream Fld**
Milwaukee County									
South Portion	**02**	**1900CST 2359CST**			**0**	**0**	**6.8M**	**151K**	**Flash Flood**
Racine County									
Racine	**02**	**1900CST 2359CST**			**0**	**0**	**1.3M**	**750K**	**Flash Flood**
Waukesha County									
Hartland to Waukesha	**02**	**1900CST 2359CST**			**0**	**0**	**200K**		**Flash Flood**
Waukesha County									
Delafield	**02**	**1925CST**			**0**	**0**			**Hail (0.88)**
Dodge County									
2 S Iron Ridge	**02**	**1926CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Walworth County									
Richmond	**02**	**1930CST 2130CST**			**0**	**0**			**Urban/Sml Stream Fld**
Washington County									
Richfield	**02**	**1935CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Waukesha County									
Waukesha	**02**	**1945CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Milwaukee County									
Franklin	**02**	**1950CST**			**0**	**0**	**15K**		**Lightning**
Milwaukee County									
Franklin	**02**	**1955CST**			**0**	**0**	**10K**		**Lightning**
Washington County									
Germantown	**02**	**1955CST**			**0**	**0**			**Hail (1.00)**

Severe weather in the form of a tornado, damaging straight-line downburst winds, large hail, and flash flooding hammered a small piece of south-central and much of southeast Wisconsin during the late afternoon and evening hours. The most significant cluster of thunderstorms developed over southern Columbia county and proceded to move east/southeast through Dodge, Jefferson, Waukesha, Milwaukee, and Racine counties. A supercell on the west end of this cluster, with a well-defined mesocyclone, produced some damaging straight-line winds and large hail up to 2.25 inches in diameter in Jefferson County, but could only generate a rotating wall cloud at its base in that county. This supercell continued to dump large hail as it moved across Waukesha County, but once it moved over the city of Franklin in southwestern Milwaukee County, it spawned a tornado at 1730CST about 3/4 of a mile northwest of the intersection of Highways 41 and 100 (27th St. & Ryan Rd, or about 5.4 miles southwest of Milwaukee's General Mitchell

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

International Airport). This tornado tore east/southeast through Oak Creek, and then exited Milwaukee County at 706 pm, where Highway 32 goes south into Racine County (or about 7 miles south/southeast of Mitchell Field). The tornado continued for about .2 miles into Racine County, just east of Highway 32, before dissipating about 2.9 miles northeast of Husher.

Luckily, no one was injured or killed by the tornado that traveled through Franklin and Oak Creek into Racine County. It intensified to a F1 rating as it damaged buildings, and turned over several semi-tractor trailers at a truck stop at the intersection of I-94 and Ryan Rd. This tornado damaged at least a dozen homes in Franklin and Oak Creek, as well as one business and one utility building. Hundreds of trees were uprooted and blown over, but luckily many of them fell between buildings! Sixty power poles were snapped by the tornadic winds in Oak Creek. In Franklin, a 40-foot TV antenna was pushed over into a neighboring home, and a 20-foot camper was severely damaged. Eyewitness reports indicate that this tornado was rain-wrapped and was multi-vortex at times. Just south of the Ryan Rd. and 27th St intersection, a spotter indicated that sustained winds were greater than 40 mph for 15 minutes as the tornado passed just to the north of their position. In Racine County, the tornado uprooted trees as it weakened.

The area from Johnson Creek to the Rome and Sullivan in Jefferson county sustained considerable hail and wind damage. Several vehicles on Interstate 94 near Johnson Creek, and in the Rome to Sullivan area, had windows broken by the large hailstones up to 2.25 inches in diameter. In addition, a few large trees were uprooted. Some of the corn crop in this swath had leaves stripped off. NWS employees at the NWS office southeast of Sullivan identified a rotating wall cloud about 3 or 4 miles west of their location

Waukesha County was raked by four rounds of severe storms. The 1st round possessed hurricane-force winds gusting to 68 knots (78 mph) at the Waukesha Airport near I-94. The city of Brookfield sustained tree and power line damage from this wet macroburst. The Jefferson County supercell constituted round #2 as it raked an area from Dousman to North Prairie (Waukesha Co.) with large hail and powerful downburst winds gusting to a measured 61 knots (70 mph). Hundreds of trees were uprooted and many power lines were downed. In North Prairie, 2 homes and a car sustained tree-inflicted damage. As this supercell moved east/southeast across Waukesha County, its strength pulsed upwards again and the Brookfield to New Berlin area experienced powerful downburst winds (round #3) that leveled more trees and power lines. A roof on an apartment complex in New Berlin was partially ripped off by the winds, but luckily no one was injured. Later in the evening, the 4th round of severe storms hit the Delafield to City of Waukesha area. Hail stones of almost an inch in diameter fell and powerful winds pushed over some trees.

Racine County residents suffered the effect of 2 rounds of severe storms. Many trees and power-line poles were leveled in both rounds. At least 60 power-line poles were pushed over. At least 50 homes and 3 farm buildings in eastern Racine County were damaged by the powerful winds, or by felled trees. Scattered severe storms also produced large hail and/or damaging winds which leveled trees in Madison (Dane County), and southern Washington County (Richfield and Germantown).

Collectively, about 70 thousand customers were without power at one time or another during the afternoon and evening hours on July 2nd due to downed power lines or lightning strikes to transformers. Twenty-five thousand of these were in Franklin and Oak Creek alone.

Minor urban/small stream flooding affected parts of Waukesha and Racine Counties, as well as much of Milwaukee County after the 1st round of storms moved through and dumped rainfall of 1 to 2 inches. Water depths on roads were reported to be 6 to 12 inches.

As with previous episodes of severe weather across southern Wisconsin during May and June, flash flooding occurred later in the evening on July 2nd, as additional rounds of storms, some severe, moved across the area. Torrential downpours, sometimes reaching an inch or more within 15 minutes, produced flash flooding across the southern half of Milwaukee County, the area from Hartland and Waukesha to Brookfield and Elm Grove in Waukesha County, and in/near the city of Racine (Racine Co.). Water depths on roads in these areas reached 1 to 4 feet. The flood waters resulted in gravel shoulder washouts on roads, structural damage to basements, damage to basement contents, and culvert damage. In the city of Franklin (Milwaukee Co.), a home's basement walls collapsed due to the pressure of the flood waters. Most small streams and creeks in Waukesha, southern Milwaukee, and eastern Racine County quickly exceeded flood stage by 1 to 2 feet due to the intense rainfall.

The Root River in Franklin, the Root River Canal at Raymond (Racine Co.), Oak Creek in South Milwaukee, and the Menomonee River in Wauwatosa all crested between 2115CST on July 2nd and 0315CST the next morning. Homes and businesses near these locations sustained the worst flood damage. Collectively, the Milwaukee County flash flooding damaged 6974 residential homes, 38 businesses, 1 utility building, and 9 agricultural buildings. About 600 acres of farm land in southern Milwaukee County sustained crop damage. In Racine County, 429 residential buildings were damaged by flash flood waters, and about 2800 acres of farm land had crop damage or soil erosion.

Urban/small stream flooding was reported in the city of Madison, in Sullivan, and around Richmond (Walworth Co.) due to the heavy rainfalls. Water depths on roads were in the 6 to 18 inch range. The Madison area picked up 1.5 to 2.5 inches of rainfall (Madison Truax Field had 1.89" for the day), the Sullivan area picked up an estimated 2.5 to 3.0 inches, and 3.7 inches fell in Richmond on the 2nd. No flood damage was reported from these locations.

Two separate lightning strikes in Franklin started fires that damaged a car and a home's garage.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Twenty-four hour rainfall amounts (mostly in the late afternoon and evening hours on July 2nd) ending 0600CST on July 3rd across southeast Wisconsin were impressive:
Waukesha County...7.00" in Elm Grove, 5.06" at Carroll College, 4.27"in Hartland
Milwaukee County...6.50" in Greenfield, 5.05" south side of Milwaukee, 4.75" in West Allis, 4 to 6" in Franklin, 4.22" at Milwaukee Mitchell International Airport
Racine County...5.76" at Raymond, 3.99" in the city of Racine

The 4.42 inches of rain recorded at Milwaukee General Mitchell International Airport on July 2nd, set a new record for the day and a new daily record for any day in July. This was also the 6th wettest day for Milwaukee going back to the start of documentation in 1871. Milwaukee would finish the month of July 2000 with 7.12 inches of rain, the 3rd wettest July on record.

Synoptically, an old frontal boundary sagged south across southern Wisconsin as low pressure moved east along it. A short-wave aloft was also moving east across the region. Moist, unstable air, drawn north into the frontal boundary, fueled the storms.

WIZ056-062-067	**Sauk - Iowa - Lafayette**								
	05 **06**	**2300CST** **0800CST**			**0**	**0**			**Fog**

Leftover moisture in the lower levels of the atmosphere, light winds, and clear skies, allowed dense fog to develop overnight across parts of south-central Wisconsin. Visibilities dropped to 1/4 mile or less, and lowered to near zero in the river valleys, especially in the Wisconsin River valley. Two dozen vehicle accidents were noted. Airplane traffic in and out of local airports was delayed until the dense fog burned off.

Lafayette County									
Gratiot	**10**	**0200CST**			**0**	**0**	**15K**		**Thunderstorm Wind**
Iowa County									
5 NW Hollandale	**10**	**0208CST**			**0**	**0**	**3K**		**Thunderstorm Wind**
Dane County									
Daleyville	**10**	**0215CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Green County									
Jordan	**10**	**0220CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Iowa County									
Barneveld	**10**	**0220CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Green County									
Monroe to Albany	**10**	**0250CST** **0300CST**			**0**	**0**	**10K**		**Thunderstorm Wind**
Dane County									
2 S Oregon	**10**	**0255CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Rock County									
Janesville to Beloit	**10**	**0305CST** **0315CST**			**0**	**0**	**15K**		**Thunderstorm Wind**
Rock County									
Janesville	**10**	**0320CST**			**0**	**0**	**10K**		**Lightning**
Rock County									
Janesville	**10**	**0330CST** **0500CST**			**0**	**0**			**Urban/Sml Stream Fld**
Walworth County									
Delavan	**10**	**0340CST**			**0**	**0**	**3K**		**Thunderstorm Wind**
Walworth County									
Pell Lake to Genoa City	**10**	**0400CST**			**0**	**0**	**346K**	**300K**	**Flash Flood**
Dane County									
Madison	**10**	**0410CST**			**0**	**0**	**3K**		**Thunderstorm Wind**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Sauk County

Limeridge to Devils Lake	**10**	**0500CST**			**0**	**0**	**175K**	**3M**	**Flash Flood**

A long line of severe thunderstorms moved east at 50 mph across south-central and southeast Wisconsin during the pre-dawn and early morning hours. Besides powerful winds, flash-flood producing rains accompanied the storms. Numerous large trees and power lines were toppled where the severe storms produced straightline downburst winds. In Gratiot (Lafayette Co.), one of the toppled trees landed squarely on a home. Janesville (Rock Co.) experienced a variety of weather hazards. Numerous trees were blown down across the city, with one damaging a home. Lightening struck a power transformer on the west side of the city, cutting off electricity to about 600 customers. In addition, 1.67 inches of rain fell in the pre-dawn hours, resulting in urban flooding. A few manhole covers reportedly popped into the air due to the pressure from the fast-moving runoff. Water depth was reported to be 6 to 12 inches. Elsewhere across south-central and southeast Wisconsin, debris removal and new power poles and lines were the order of the day.

Yet another round of serious flash flooding occurred across the central part of Sauk County from the Lime Ridge area east to the Devil's Lake and Baraboo area. After the intial line of storms moved through the county, several additional thunderstorms developed over the western part of the county and repeatedly trained across the same locations. An unofficial 6 to 8 inches of rain fell during the pre-dawn hours, but 3.5 inches were registered at the Baraboo Wastewater Treatment Plant. Nearly every creek and stream in this swath exceeded flood stage experienced rapid increases in water levels which . Highway 113 leading southeast out of Baraboo had several sections washed out. Highway 159 up to Devil's Lake was closed due to the flooding. Highway 12 from West Baraboo down to near the old Badger Ammo Plant was flooded and closed. Several of the hiking and biking trails, and camping spots around Devil's lake had washouts. Several roads on the south side of Baraboo experienced washouts or undercuts as creeks and streams draining north out of the Baraboo Bluffs became raging currents. Mud covered many of the roads in the southern part of Baraboo, and water/mud marks were left at the 8 foot mark in some businesses! Crop damage and soil erosion was substantial in surrounding farm lands.

Flash flooding hit the southeast part of Walworth County after 2 inches of rain fell in 1 hour on saturated ground. Nippersink Creek quickly exceeded its banks in the Pell Lake and Genoa City area. Ten homes experienced structural or contents damage, and one home was destroyed. Eight people were left homeless and 6 families were evacuated. Several roads had washout sections and many others had gravel shoulder washouts. Surrounding agricultural lands sustained crop washouts or soil erosion.

Racine County

Waterford to Caledonia	**14**	**0030CST** **0200CST**			**0**	**0**			**Urban/Sml Stream Fld**

Waukesha County

Waukesha to 2 S Waukesha	**14**	**0030CST** **0200CST**			**0**	**0**			**Urban/Sml Stream Fld**

Scattered thunderstorms moved through southeast Wisconsin and dumped brief, very heavy rains that led to urban-type flooding in the Waterford area of western Racine county, and over the south side of the city of Waukesha. Water depth on some roads reached 6 to 12 inches. Reports indicated that up to 1 inch of rain fell in 15 minutes ending at 0040CST on July 14th. In addition, gusty winds of 39 to 43 knots (45 to 50 mph), and hail one-fourth inch in diameter, and overflowing rain gutters were noted with the downpours.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Dodge County

Juneau 01 1725CST 0 0 2K **Thunderstorm Wind (G52)**

An isolated severe thunderstorm pulsed up over central Dodge County and moved east at 10 mph. Downburst winds toppled several large trees.

Dane County

Belleville 05 1417CST 0 0 3K **Thunderstorm Wind (G56)**

Green County

2 W Dayton to 6 ESE Dayton 05 1420CST 1435CST 0 0 1.5M 300K **Thunderstorm Wind (G74)**

Rock County

3 SW Evansville to 2.5 SE Avalon 05 1435CST 1505CST 0 2 5M 1.3M **Thunderstorm Wind (G100)**

Rock County

2 SW Evansville 05 1443CST 0.1 20 0 0 5K **Tornado (F0)**

Narrative is incorporated in discussion of August 5th storms below.

Rock County

Janesville 05 1500CST 1630CST 0 0 **Urban/Sml Stream Fld**

Walworth County

East Troy 05 1530CST 0 0 2K **Thunderstorm Wind**

Racine County

3 W Waterford 05 1538CST 0 0 2K **Thunderstorm Wind**

Kenosha County

3 SW Twin Lakes 05 1550CST 0 0 1K **Thunderstorm Wind**

Milwaukee County

Countywide 05 1600CST 1800CST 0 0 **Urban/Sml Stream Fld**

This summer's most powerful downburst wind event to affect south-central and southeast Wisconsin pummeled portions of Dane, Green, and Rock counties with damaging hurricane-force winds, large hail, and urban-flood rains. As the 35 mile long line of thunderstorms moved southeast through Dane, northern Green, and Rock Counties, it increased in strength, ultimately producing straight-line winds estimated up to 100 knots (115 mph), heavy rains at a rate of 1 to 3 inches per hour, and hail stones 1 inch in diameter. Due to downed power lines and poles, ultimately about 18,000 customers had electrical power disrupted for 1 to 2 days. Descriptions of weather-related events follow in a county-by-county breakdown.

Dane County:
Powerful thunderstorm winds, estimated at 56 knots (65 mph), toppled several large trees in and near the city of Belleville. There were no reports of injuries or deaths. Minor urban-type flooding was noted due to intense rain accompanying the storm

Green County:
The squall-line intensified as it clipped the northeast quarter of Green County. Based on inflicted damage, winds gusts were estimated to be 74 knots (85 mph). The worst-hit area extended from a subdivision west of the village of Dayton (Town of Exeter), east/southeast to the county line. About 50 homes sustained varying amounts of damage caused by felled trees, tree branches, or the wind outright. Damage to home siding and roofs was also noted. Hundreds of trees were toppled, about 2 dozen farm buildings were damaged or destroyed, several silos were damaged, and two semi-tractor trailers were overturned. Many power lines were either blown over or knocked down by tree debris.

Rock County:
This county bore the brunt of the storm as its straight-line winds intensified to an estimated 100 knots (115 mph). The macroburst damage path was 3 to 6 miles wide, extending from southwest of Evansville in the Town of Magnolia (Highway 59 and A) east/southeast through the city of Janesville to southeast of Avalon near Caver Roehl Park. A newspaper headline nicely stated the effects: Rain! Wind! Wow! The powerful winds leveled thousands of trees (some 200 years old); tore roofs off homes; businesses, and farm buildings; blew tops of silos off, flipped over vehicles; blew in windows; damaged or peeled off home siding; knocked over billboards and road signs; closed many roads due to debris, and flattened corn and soybean fields. Based on newspaper photographs and eyewitness accounts, maximum wind gusts were estimated to be in the 87 to 100 knots range (100 -115 mph). The worst of the damage appeared to be equivalent to that caused by tornado winds of about 115 mph, or at the bottom of the F2 category. Many people noted that the sky grew very dark as the storm blew in with a wall of white rain mixed with tree leaves and branches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

The city of Janesville was at ground zero, as a 3.7 square mile looked like a bomb had hit its downtown area and the near east and west sides. A roof was torn off one business, and bricks were pealed off another business. It took at least 2 weeks to remove the tree debris from city streets, sidewalks, and backyards. Dozens of vehicles were damaged by felled trees and branches. It is estimated that 400 to 500 city homes sustained some degree of damage (6 destroyed). Traxler and Bond Parks looked like disaster areas and were closed. About 50 electrical poles were snapped by tree debris or the winds. One person in the city was injured when a tree fell on their pickup truck. Just north of Janesville on Interstate-90, another person was injured when their SUV was flipped over by the winds. In addition, 5 semi-tractor trailers were overturned on I-90 in the same vicinity. A new sub-division 3 miles south of Janesville experienced extensive roof or siding damage due to the winds or tree debris. Several vehicles were damaged as well. Just to the south of the city, the wastewater treatment plant recorded 1.48 inches of rain as the storms moved through, resulting in urban flooding. There were other unofficial reports of 2 to 3 inches in the city area

The civil Town of Magnolia, in the western part of the county, was also hard hit by the macroburst, especially near and along Highway 59 and County Trunk Highway A. About 40 power poles in this Town were toppled by the winds or tree debris

A little further north on Croft Road, just southwest of Evansville, a local resident noted this sequence of events: the initial, powerful winds and blinding rains lasted for about 5 minutes and were followed by hailstones up to 1 inch in diameter. Then the rain and hail stopped. After a couple minutes he noticed across the road in a field a ground-based vortex pulling corn stalks up to about 200 feet above the ground, while above it at cloud base was a funnel cloud. This weak vortex then hit a barn and caused slight damage before dissipating. Shortly thereafter, another round of rain, and gusty, but much weaker winds occurred. Based on this resident's account, and their prior experiences with tornadoes while living in Texas, this vortex was classified as a tornado.

The macroburst continued to inflict wind damage to a point about 3 miles east/southeast of the Janesville city limits along Highway 14, at which point it weakened. However, the thunderstorms briefly intensified once again southeast of the village of Avalon near Carver Roehl Park. At this location, a barn's roof was lifted and dropped by powerful winds, resulting in a collapsed structure which trapped 40 steer. Fifteen of the steer died from injuries, and some of the hay bales were destroyed. Collectively across Rock County, about 4500 acres of corn and soybean crops were badly damaged or destroyed. Thirty-five farm buildings had minor damage, 8 had major damage, and 19 were destroyed by the winds.

Walworth County:
The remains of the squall-line generated downburst winds which leveled large trees in and near the city of East Troy.

Racine County:
The remains of the squall-line generated downburst winds which leveled large trees west of Waterford

Kenosha County:
The remains of the squall-line generated downburst winds which leveled large trees southwest of the village of Twin Lakes.

Milwaukee County:
The remains of the thunderstorms dumped rain amounts of 2.25 to 3.1 inches across Milwaukee County based on Ham reports. Moderate urban flooding resulted. A West Allis motorist was rescued from their stalled vehicle due to water depths of 1.5 to 3 feet in low spots on roads. Similar water depths on strees were noted elsewhere in the county, especially in the southern half. No damage was reported.

Synoptically, an upper level trough was moving across Wisconsin on August 5th, with a weak vorticity maxima over the southern part of the state moving east/southeast. The south winds of a low-level jet fed the storms as west-northwest flow at 18,000 feet intensified to 60 knots based on profiler data. Thunderstorm echo tops were 40 to 42,000 feet.

Green County									
5 SW Albany	**06**	**1305CST**			**0**	**0**	**2K**		**Thunderstorm Wind (G52)**
Green County									
3 N Brodhead	**06**	**1320CST**			**0**	**0**			**Hail (1.00)**
Rock County									
Orfordville to Janesville	**06**	**1330CST 1340CST**			**0**	**0**	**50K**		**Thunderstorm Wind**
Rock County									
Orfordville	**06**	**1346CST**			**0**	**0**			**Funnel Cloud**
Rock County									
Hanover	**06**	**1351CST**			**0**	**0**			**Funnel Cloud**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

Walworth County

Fontana | **06** | **1425CST** | **0** | **0** | **2K** | **Thunderstorm Wind**

Scattered severe thunderstorms popped up over parts of south-central and southeast Wisconsin, resulting in scattered damage reports. Downburst winds gusting to around 60 mph leveled large trees in parts of Green, Rock, and Walworth counties. The tree debris brought down more power lines in Janesville (Rock Co.), causing the loss of electrical power to another 500 customers. This was on the heels of the major macroburst which raked Janesville the day before. The main cluster of thunderstorms which developed over Green County displayed supercell characteristics and had a hook echo/BWER/mesocyclone as it moved east into Rock County. Funnel clouds were noted over Orfordville and Hanover (Rock Co.), but no tornado spin ups were reported. Low-leve inflow into the storms was from the southwest/west. Synoptically, the storms developed ahead of a cold front found from eastern Iowa into southwestern Wisconsin. Air temperatures were in the lower to mid 80s with surface dewpoints in the lower to mid 70s. LI's were -5 to -8 and CAPES were 1500-2000.

Fond Du Lac County

3 NW North Fond Du L | **14** | **2350CST** | **0** | **0** | **1K** | **Thunderstorm Wind**

Fond Du Lac County

Mt Calvary | **15** | **0000CST** | **0** | **0** | **1K** | **Thunderstorm Wind**

Sheboygan County

3 W Greenbush | **15** | **0010CST** | **0** | **0** | **1K** | **Thunderstorm Wind**

Scattered thunderstorm wind damage was noted across parts of east-central Wisconsin during the overnight hours. Downburst winds knocked many large tree branches down, and in addition, blew over several flower boxes and pots in the Mt. Calvary area of northeast Fond du Lac county. The responsible cluster of thunderstorms developed over northeast Minnesota and moved southeast along and north of a warm front which extended from Wausau to Oshkosh in Wisconsin. Dewpoints were in the lower 70s south of the warm front.

Iowa County

Highland to Dodgeville | **17** | **0127CST 0150CST** | **0** | **0** | **15K** | **Thunderstorm Wind (G56)**

Lafayette County

2 SW Shullsburg | **17** | **0150CST** | **0** | **0** | **2K** | **Thunderstorm Wind**

Green County

Monroe to 5 E Dayton | **17** | **0215CST 0225CST** | **0** | **0** | **4K** | **Thunderstorm Wind**

A cluster of severe thunderstorms moved east/southeast across parts of south-central Wisconsin during the pre-dawn hours. Downburst winds gusting to 52 to 56 knots (60 to 65 mph) toppled large trees. Some of the tree debris pulled down a few power lines which resulted in the loss of electrical power to dozens of customers. In addition, highway signs in Dodgeville were blown down by the powerful winds. Synoptically, low pressure was over southwest Iowa with a warm front extending east to east-central Iowa. The responsible storms initially developed over northwest Iowa. Unstable, moist air with surface dewpoints in the lower to mid 70s was found south of the warm front. During the time of the downburst winds, surface temperatures over southwest and south-central Wisconsin were around 60!

Iowa County

Dodgeville | **19** | **1230CST** | **0** | **0** | **Funnel Cloud**

Rock County

Beloit | **19** | **1410CST** | **0** | **0** | **Funnel Cloud**

Funnel clouds were reported over a small part of south-central Wisconsin during the afternoon hours. They were apparently of the "cold-air funnel" variety, and associated with low-top convection.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Fond Du Lac County									
Brandon	**22**	**1505CST 1510CST**			**0**	**0**	**15K**		**Thunderstorm Wind**
Fond Du Lac County									
Ripon	**22**	**1505CST 1700CST**			**0**	**0**	**50K**		**Flash Flood**
Fond Du Lac County									
Ripon	**22**	**1515CST**			**0**	**0**	**10K**		**Thunderstorm Wind (G56)**
Fond Du Lac County									
Fond Du Lac	**22**	**1520CST 1540CST**			**0**	**0**	**15K**		**Lightning**
Fond Du Lac County									
Ripon	**22**	**1520CST**			**0**	**0**	**15K**		**Lightning**
Fond Du Lac County									
Fond Du Lac	**22**	**1530CST 1535CST**			**0**	**0**	**5K**		**Thunderstorm Wind**
Sheboygan County									
3 N Elkhart Lake	**22**	**1550CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Fond Du Lac County									
Fond Du Lac	**22**	**1600CST 1800CST**			**0**	**0**			**Urban/Sml Stream Fld**
Sheboygan County									
Plymouth to Sheboygan Falls	**22**	**1600CST 1800CST**			**0**	**0**	**30K**		**Flash Flood**
Fond Du Lac County									
2 E Eden	**22**	**1601CST**			**0**	**0**			**Funnel Cloud**

A mesoscale convective system (MCS) moved east across southern Wisconsin and generated scattered severe downburst winds, flood-producing rains, and intense lightning strikes. The powerful winds leveled some trees in the Brandon area, with one tree falling on and damaging a vehicle. A separate wet microburst struck the city of Ripon (Fond du Lac Co.) with winds estimated to 56 knots (65 mph), resulting in some downed trees or tree limbs. In addition, unofficial heavy rains of 3.5 to 4.5 inches fell in about 1 to 1.5 hours in Ripon, resulting in flash flooding. Water depths quickly reached 1 to 3 feet in and around Ripon. Manhole covers popped and damaged a vehicle in the city, and a railroad bed was washed out by the flood waters. Several cars stalled in the deep water. The severe storms moved east through the Fond du Lac city area, where their winds pushed over more trees. Urban flooding affect much of the city due to the heavy rains. Some cars were pushed down a flooded road in the central part of the city where water depths were 1 to 2 feet. Several intense lightning strikes knocked power transformers out of service in and around the city of Fond du Lac. This resulted in the loss of electrical power to 3,833 customers. A funnel cloud was spotted east of Eden. The thunderstorms then moved east into Sheboygan County where flash flooding affected the Plymouth to Sheboygan Falls area. Water depths on roads in this area reached 1 to 3 feet, and gravel shoulder washouts were noted. Downburst winds pushed over some trees north of Elkhart Lake. Urban flooding was reported in the city of Sheboygan.

Synoptically, a low pressure was found over western Kansas with a warm front east through southern Iowa to central Illinois. A secondary surface trough extended northeast through Fond du Lac and Sheboygan counties. Aloft, a vorticity maxima moved across southern Minnesota through southern Wisconsin. Radar imagery clearly showed the embedded MCS to have Neddy-Eddy characteristics (counter-clockwise rotation). The comma-head portion of the MCS moved over Fond du Lac and Sheboygan counties, resulting in many echoes training over the same spot. South of the warm front one could find surface dewpoints in the 70 to 75 range.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ056-062-067>068 **Sauk - Iowa - Lafayette - Green**

	22 23	2300CST 0800CST			0	0			Fog

WIZ046>047-057>059-063>065-069>070 **Marquette - Green Lake - Columbia - Dodge - Washington - Dane - Jefferson - Waukesha - Rock - Walworth**

	23	0000CST 0900CST			0	0			Fog

WIZ051>052-060-066-071>072 **Fond Du Lac - Sheboygan - Ozaukee - Milwaukee - Racine - Kenosha**

	23	0300CST 0700CST			0	0			Fog

The combination of weak high pressure, light winds, mostly clear skies, and leftover low level moisture allowed for the formation fo dense fog across south-central and southeast Wisconsin. As usual, it had rained across most of the area the day before. Visibilities lowered to 1/4 mile or less in most areas. Numerous vehicle accidents were noted in area newspaper. Several flights were delayed at both Madison's Truax Field and Milwaukee's Mitchell Field

WIZ051>052-059>060-066-071>072 **Fond Du Lac - Sheboygan - Washington - Ozaukee - Milwaukee - Racine - Kenosha**

	23 24	2100CST 0700CST			0	0			Fog

WIZ046>047-056>058-062>065-067>070 **Marquette - Green Lake - Sauk - Columbia - Dodge - Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Rock - Walworth**

	24	0000CST 0700CST			0	0			Fog

The combination of weak high pressure, light winds, mostly clear skies, and leftover low level moisture allowed for the formation fo dense fog across south-central and southeast Wisconsin. This was the 2nd consequitive overnighth period that had dense fog. Visibilities lowered to 1/4 mile or less in most areas. Numerous vehicle accidents were noted in area newspaper. Several flights were delayed at both Madison's Truax Field and Milwaukee's Mitchell Field.

Jefferson County									
2 S Lake Mills	**26**	**0800CST**			**0**	**0**		**2K**	**Thunderstorm Wind**
Jefferson County									
Johnson Creek to 3 NNW Johnson Creek	**26**	**0817CST 0820CST**			**0**	**0**		**4K**	**Thunderstorm Wind**
Waukesha County									
Wales	**26**	**0835CST**			**0**	**0**		**2K**	**Thunderstorm Wind**
Waukesha County									
Pewaukee	**26**	**0854CST**			**0**	**0**		**210K**	**Lightning**
Waukesha County									
Hartland	**26**	**0900CST**			**0**	**0**		**10K**	**Lightning**
Milwaukee County									
Countywide	**26**	**0910CST 0920CST**			**0**	**0**		**50K**	**Lightning**

Scattered severe storms with downburst winds gusting to around 52 knots (60 mph), resulting in large trees being pushed over or tree branches knocked down. The felled trees blocked a trailer park near Johnson Creek for several hours until cleanup crews could clear the debris. A lightning bolt started an attic fire in a Pewaukee home (Waukesha Co.). This fire would ultimately spread and cause considerable damage before being pt out. Rainfall amounts of 1.50 to 1.90 inches were reported within 1 to 3 hours in Wales and just south of Dousman (Waukesha Co.). However, no flooding was noted. Several lightning strikes in and around Milwaukee County knocked out some power transformers or other lines which resulted in the lose of power to about 10,000 customers. A common emergency communications line serving the cities of Delafield, Hartland, Chenequa, Pewaukee, Nashotah, Merten, Stone bank, and North Lake was struck by lightning and knocked out of service. Repair bills were about $10,000. Synoptically, a surface trough and an upper level short-wave moved southeast through Wisconsin, setting the stage for the cluster of storms to pass through.

National Weather Service
Storm Data and Unusual Weather Phenomena

August 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Sauk County									
3 NW La Valle	**01**	**1330CST**			**0**	**0**			**Hail (1.00)**
Sauk County									
5 W Lake Delton	**01**	**1355CST**			**0**	**0**			**Hail (0.75)**
Marquette County									
3 W Endeavor	**01**	**1500CST**			**0**	**0**	**1K**		**Thunderstorm Wind**
Columbia County									
Poynette to Arlington	**01**	**1545CST 1548CST**			**0**	**0**			**Hail (0.75)**

Two clusters of severe thunderstorms moved east/southeast across south-central Wisconsin during the mid to late afternoon hours. Damaging straight-line winds downed large trees near Endeavor (Marquette Co.), and produced large hail elsewhere in Sauk and Columbia Counties. The second, and later, cluster of storms transformed into a single line about 10 to 15 miles wide as it moved through eastern Sauk, all of Columbia, and northern Dane County. As it propagated and developed to the southeast, cloud base rotation was noted by several spotters in southern Columbia County. Cloud-base rotation was also noted in an isolated storm over northern Dane County. However, the surface outflow coupled with a west-east orientated cold front which was sliding south. This frontal boundary pushed 10 miles south of the main updraft tower, thus robbing the storm of low-level vorticity needed to spin up a vortex at ground level. Mesocylcones were observed on the Milwaukee/Sullivan WSR-88D Doppler radar.

Marquette County									
Germania	**02**	**0250CST**			**0**	**0**			**Hail (0.75)**
Fond Du Lac County									
Fond Du Lac	**02**	**0400CST**			**0**	**0**	**75K**		**Lightning**

An isolated severe thunderstorm pulsed up over Marquette County and produced large hail. Elsewhere, a cluster of thunderstorms moved through the city of Fond du Lac and produced lightning strikes. One lightning bolt struck the communications tower on the Fond du Lac courthouse. The tower was damaged and some bricks on the side of the building were knocked loose. Several radio receivers, phone lines for the 911 Center, and a radar display system were also damaged.

WIZ063-066	**Dane - Milwaukee**								
	11	**0000CST 2359CST**			**0**	**0**			**Record Rainfall**
Racine County									
Union Grove to Racine	**11**	**1045CST 1230CST**			**0**	**0**			**Urban/Sml Stream Fld**
Walworth County									
1 W Walworth	**11**	**1230CST**			**0**	**0**	**10K**		**Lightning**
Walworth County									
Whitewater to La Grange	**11**	**1545CST 1555CST**			**0**	**0**	**10K**		**Thunderstorm Wind**
Milwaukee County									
Milwaukee	**11**	**1615CST**			**0**	**0**	**30K**		**Lightning**
Lafayette County									
Belmont to Shullsburg	**11**	**1630CST 1640CST**			**0**	**0**	**20K**		**Hail (1.00)**
Lafayette County									
Lamont	**11**	**1655CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Green County									
3 W Monroe	**11**	**1710CST**			**0**	**0**			**Funnel Cloud**

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Green County									
Browntown	**11**	**1715CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Lafayette County									
South Wayne	**11**	**1715CST**			**0**	**0**	**30K**		**Lightning**
Dane County									
Madison to Maple Bluff	**11**	**1725CST 1728CST**			**0**	**0**			**Hail (1.00)**
Green County									
Monticello	**11**	**1730CST**			**0**	**0**	**10K**		**Hail (1.50)**
Dane County									
Oregon	**11**	**1733CST**			**0**	**0**			**Hail (0.75)**
Lafayette County									
7.5 N Argyle	**11**	**1740CST 1930CST**			**0**	**0**	**10K**		**Flash Flood**
Jefferson County									
1 W Jefferson	**11**	**1810CST**			**0**	**0**			**Hail (0.88)**
Dane County									
Madison Truax Arpt	**11**	**1835CST**			**0**	**0**			**Thunderstorm Wind (G64)[M]**
Waukesha County									
Waukesha	**11**	**1840CST**			**0**	**0**	**3K**		**Thunderstorm Wind**
Green County									
Monroe	**11**	**1900CST 2100CST**			**0**	**0**	**100K**		**Flash Flood**
Milwaukee County									
Milwaukee	**11**	**1900CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Marquette County									
2 N Westfield	**11**	**1915CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Rock County									
Johnstown	**11**	**1915CST**			**0**	**0**			**Hail (1.00)**
Green County									
Monroe	**11**	**1930CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Walworth County									
2 N Elkhorn	**11**	**1930CST**			**0**	**0**	**2K**		**Thunderstorm Wind**
Green Lake County									
Princeton	**11**	**1950CST**			**0**	**0**			**Hail (1.00)**
Milwaukee County									
Wauwatosa to Milwaukee	**11**	**2000CST 2300CST**			**0**	**0**	**100K**		**Flash Flood**
Kenosha County									
Kenosha	**11**	**2030CST 2035CST**			**0**	**0**	**10K**		**Hail (1.00)**
Waukesha County									
Waukesha	**11**	**2115CST 2359CST**			**0**	**0**	**50K**		**Flash Flood**

Three rounds of severe thunderstorms affected parts of south-central and southeast Wisconsin on September 11, 2000:

1) The 1st round consisted of a cluster of storms that produced damaging straight-line winds in Walworth County. Several reports of toppled large trees originated from the Whitewater to La Grange area down to the Richmond area

2) The second round started off as a cluster of storms over northeast Iowa which moved into southwest Wisconsin. This cluster transformed into a solid line of storms, some severe, as it moved east through south-central Wisconsin. Eventually this line extended from northern Dane County south to the Illinois border as it moved east. A well-defined outflow boundary/gust front, marked at

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

cloud base by a dramatic shelf cloud, developed about 5 to 15 miles out ahead of the line of storms. Peak winds were in the 26 to 44 knot (30 to 50 mph) range in the area behind the surface gust front position, while damaging winds in excess of 50 knots (58 mph) were found near and behind the most intense rainfalls. The storms produced damaging straight-line winds which toppled many trees and a few power lines, large hail stones up to 1.50 inches in diameter, intense lightning strikes, and torrential rainfalls of 2 to 4 inches, which resulted in flooding, flash flooding, or urban/small stream flooding. Interestingly, the downburst winds on the back (west) side of the most intense cells peaked in the 58 to 64 knot range (58 to 74 mph) in isolated spots, one of them being Madison's Truax Field. The peak gust at that location was from the southeast (150 degrees).

Torrential downpours, estimated at 3 to 4 inches within 1 to 2 hours based on WSR-88D Doppler radar, caused a flash flood, and resultant mudslide, a few miles north of Argyle (Lafayette Co.) on Highway 78 just outside of Blanchardville, temporarily closing that road. Similar amounts fell across Green County just to the east. Scattered flash flooding was reported in Green County which resulted in gravel shoulder washouts on some roads, and significant flooding of low-lying roads, basements, and businesses, especially in and around Monroe. Amateur Radio operators (Hams) measured 3.60 inches of rain in Brodhead, and 3.56 inches in New Glarus, both in Green County. As the solid line of storms moved east, it produced additional flash flooding in and around the city of Waukesha (Waukesha Co.). Water depths on roads reached 2 to 4 feet, and gravel shoulder washouts were noted, especially from north of the city to the southwest side. Further east in Milwaukee County, flash flooding stranded numerous motor vehicles, especially around 92nd and Hampton in Milwaukee. Residential home and city park landscaping were damaged by the flood waters. The Menomonee River in Wauwatosa crested 1.71 feet above the 11 foot flood stage at 2130CST. There were reports of 2 to 4 feet water depths on some roads in northern Milwaukee County. A Ham at 82nd and Congress in the city of Milwaukee measured a rainfall of 2.76 inches. Several other mainstream rivers in south-central and southeast Wisconsin rose to bankfull or exceeded flood stage by 1 foot or less.

Besides some large trees toppled by thunderstorm winds in the city of Kenosha (Kenosha Co.), the hail that fell in the city covered the ground white. Lightning struck and killed 14 beef cattle on Meyer Road near the South Wayne village limits (Lafayette Co.). Lightning also struck a residental home just west of the village of Walworth (Walworth Co.), resulting in a fire that damaged the roof and attic. The same thing happened to a city of Milwaukee home on 97th Ave. In Racine County on Interstate-94, the torrential rains reduced visibility to less than 50 yards, forcing motor vehicles to pull to the side of the roac.

Madison (Dane Co.) registered 1.71 inches of rain on the 11th, breaking the old daily precipitation record of 1.57 incheds set in 1879. Likewise, Milwaukee measured 2.96 inches of rain, breaking the old daily precipitation record of 1.73 inches set in 1933.

3) The 3rd round of severe storms affect the counties of Marquette and Green Lake. Isolated, damaging staight-line winds and some large hail were produced by a solid line of thunderstorms which diminished in strength and broke up as they moved into Fond du Lac and Sheboygan counties.

Synoptically, a surface low pressure over Sioux Falls, SD in the early morning hours moved east/northeast to near Green Bay by 2200CST. South winds ahead of the low pressure pulled moist air, with surface dewpoints in the lower 70s, into southern Wisconsin. The unstable air (CAPES 2500 and LI's -6 to -8) and right rear quadrant region of the jet streak led to the pre-cold-frontal thunderstorms during the afternoon hours. A trailing cold front then pushed east during the evening hours reaching a Green Bay to Madison line by 2200CST.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
Kenosha County									
Kenosha	**22** **23**	**2230CST** **2230CST**			**0**	**0**			**Urban/Sml Stream Fld**
Milwaukee County									
West Allis to Franklin	**22** **23**	**2230CST** **0200CST**			**0**	**0**			**Urban/Sml Stream Fld**
Racine County									
North Cape to Racine	**22** **23**	**2230CST** **2230CST**			**0**	**0**			**Urban/Sml Stream Fld**

Intense rainfalls of 1 to around 2.50 inches resulted in urban and small stream flooding over parts of southeast Wisconsin. Water depths on some low-lying roads reached 6 to 12 inches. Water levels in several small streams briefly exceeded bankfull by a foot or less. Two separate rounds of thunderstrorms were responsible for the flooding. An Amateur Radio operator near State Fair Park in West Allis measured a rainfall of 2.05 inches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ056-062>063-067>069 Sauk - Iowa - Dane - Lafayette - Green - Rock

23	2200CST	0	0			Fog
24	0800CST					

Dense fog reduced visibilities to less than 1/4 mile across south-central Wisconsin during the overnight hours to the mid-morning hour on the 24th. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

WIZ046>047-057>058-064>065-070>072 Marquette - Green Lake - Columbia - Dodge - Jefferson - Waukesha - Walworth - Racine - Kenosha

24	0000CST	0	0			Fog
	0800CST					

Dense fog reduced visibilities to less than 1/4 mile across parts of south-central, and southeast Wisconsin during the overnight hours to the mid-morning hour on the 24th. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

WIZ051>052-059>060-066 Fond Du Lac - Sheboygan - Washington - Ozaukee - Milwaukee

24	0200CST	0	0			Fog
	0700CST					

Dense fog reduced visibilities to less than 1/4 mile across southeast Wisconsin during the overnight hours to the mid-morning hour on the 24th. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

WIZ051>052-052-058>060-065>066 Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee - Waukesha - Milwaukee

24	1600CST	0	0			Fog
25	1000CST					

Due to a stagnant weather pattern that resulted in dense fog the night before, another round of dense fog formed again during the afternoon hours of the 24th and continued into the morning hours of the 25th. Visibilities were ruduced to less than 1/4 mile or near zero across southeast Wisconsin. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

WIZ070>072 Walworth - Racine - Kenosha

24	2100CST	0	0			Fog
25	0900CST					

Due to a stagnant weather pattern that resulted in dense fog the night before, another round of dense fog formed again during the evening hours of the 24th and continued into the morning hours of the 25th. Visibilities were ruduced to less than 1/4 mile or near zero across southeast Wisconsin. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

WIZ046>047-056>057-062>063-067>069 Marquette - Green Lake - Sauk - Columbia - Iowa - Dane - Lafayette - Green - Rock

25	0000CST	0	0			Fog
	0800CST					

Due to a stagnant weather pattern that resulted in dense fog the night before, another round of dense fog formed again during the pre-dawn hours of the 25th and continued to the mid-morning hour. Visibilities were ruduced to less than 1/4 mile or near zero across south-central Wisconsin. Many airplane flights were delayed or canceled at local airports. Several vehicle accidents were

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

also noted. The dense fog was the result of evaporation of rain that fell during the day on the 23rd, clear skies, and a weak east to southeast return flow around a weak high pressure over the Western Great Lakes region.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ062-067>068 **Iowa - Lafayette - Green**

11 **0800CST** **0** **0** **Heavy Snow**
2300CST

Heavy snow accumulations, accompanied by northeast to north winds gusting to 30 mph, affected parts of southcentral and southwest Wisconsin. This system was the first in a series of winter disturbances that accumulatively would lead to new, monthly snowfall records for December, and new record snow depths at any one time. Generally 8 to 10 inches fell, but an estimated 10.5 inches accumulated in norhteastern Iowa County. Dozens of vehicle accidents resulted due to slippery roads and blowing snow.

Synoptically, a surface low moved from central Colorado Sunday night December 10th, to north of Dallas, TX, by the end of the 10th, to eastcental Illinois by noon CST on the 11th, and then to near Toledo, Ohio by 2100CST. Strong upper level forcing due to a coupled jet structure over Wisconsin, along with strong midlevel differential positive vorticity advection, led to significant upward vertical motions over southern Wisconsin and northern Illinois, thus deepening and slowing the surface lowa.

This system produced a heavy band of snow, ranging from 8 to 12 inches, across northeast Iowa, extreme northern Illinois, and southern Wisconsin. As the surface low moved into western Indiana, gusty northeast winds to 30 knots, in the northwest quadrant of the circulation around the low, drew moisture from Lake Michigan. This enhanced the snowfall in the counties adjoining the lake from north of Chicago, to northern Milwaukee county. Snowfall totals in these lakeshore locations were between 12 and 15 inches.

WIZ056>058-063>064-069>070 **Sauk - Columbia - Dodge - Dane - Jefferson - Rock - Walworth**

11 **1000CST** **0** **0** **Heavy Snow**
2359CST

Heavy snow, accompanied by northeast to north winds gusting to around 30 mph, affected all of south-central and parts of southeast Wisconsin. This system was the first in a series of winter disturbances that accumulatively would lead to new, monthly snowfall records for December, and new record snow depths at any one time. Accumulations were generally 7 to 10 inches, although a band of 10 to 11 inches was found from northwest Dane County to south-central Columbia County, and across the southern parts of Green, Rock, and Walworth Counties. The greatest reported value was 11.1 inches in Delavan (Walworth Co.). Lesser amounts (7 to 9 inches) were noted in Dodge and Jefferson Counties. Dozens of vehicle accidents resulted due to slippery roads and blowing snow. The fresh snowcover, combined with clear skies during the early morning hours of the 12th, resulted in a new record low of -10 at Janesville (Rock Co.). However, other parts of the Janesville area dropped to -17 and every other location in south-central Wisconsin sunk to the -10 to -15 range for morning lows.

Synoptically, a surface low moved from central Colorado Sunday night December 10th, to north of Dallas, TX, by the end of the 10th, to east-cental Illinois by noon CST on the 11th, and then to near Toledo, Ohio by 2100CST. Strong upper level forcing due to a coupled jet structure over Wisconsin, along with strong mid-level differential positive vorticity advection, led to significant upward vertical motions over southern Wisconsin and northern Illinois, thus deepening and slowing the surface low

This system produced a heavy band of snow, ranging from 8 to 12 inches, across northeast Iowa, extreme northern Illinois, and southern Wisconsin. As the surface low moved into western Indiana, gusty northeast winds to 30 knots, in the northwest quadrant of the circulation around the low, drew moisture from Lake Michigan. This enhanced the snowfall in the counties adjoining the lake from north of Chicago, to northern Milwaukee county. Snowfall totals in these lakeshore locations were between 12 and 15 inches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ051>052-059>060-065>066-071>072 **Fond Du Lac - Sheboygan - Washington - Ozaukee - Waukesha - Milwaukee - Racine - Kenosha**

11 1100CST 0 0 Heavy Snow
12 0100CST

Heavy snow, accompanied by northeast to north winds gustingn to around 40 mph, affected all of southeast Wisconsin. This system was the first in a series of winter disturbances that accumulatively would lead to new, monthly snowfall records for December, and new record snow depths at any one time. Accumulations ranged from 6 to 8 inches in Fond du Lac County on up to 14.5 inches in Racine and Kenosha Counties (at Wind Point and the city of Kenosha, respectively). A new calendar day snowfall record was set at Milwaukee's Mitchell Field on the 11th where 13.6 inches fell, breaking the old record of 13.1 inches set back in 1987. This is also the greatest total for any calendar day in December at Milwaukee. Dozens of vehicle accidents were noted due to slippery roads and blowing snow. Other notable snowfall totals were 12 inches in Sheboygan (Sheboygan Co.), an estimated 11 to 11.5 inches in extreme southeast Waukesha County, and an estimated 10 to 10.5 inches in extreme southeast Ozaukee County.

Synoptically, a surface low moved from central Colorado Sunday night December 10th, to north of Dallas, TX, by the end of the 10th, to east-cental Illinois by noon CST on the 11th, and then to near Toledo, Ohio by 2100CST. Strong upper level forcing due to a coupled jet structure over Wisconsin, along with strong mid-level differential positive vorticity advection, led to significant upward vertical motions over southern Wisconsin and northern Illinois, thus deepening and slowing the surface low

This system produced a heavy band of snow, ranging from 8 to 12 inches, across northeast Iowa, extreme northern Illinois, and southern Wisconsin. As the surface low moved into western Indiana, gusty northeast winds to 30 knots, in the northwest quadrant of the circulation around the low, drew moisture from Lake Michigan. This enhanced the snowfall in the counties adjoining the lake from north of Chicago, to northern Milwaukee county. Snowfall totals in these lakeshore locations were between 12 and 15 inches.

WIZ046>047-051-056>058-062>064-067>070 **Marquette - Green Lake - Fond Du Lac - Sauk - Columbia - Dodge - Iowa - Dane - Jefferson - Lafayette - Green - Rock - Walworth**

18 1400CST 0 0 Heavy Snow
2330CST

Heavy snow fell across all of south-central and southeast Wisconsin, adding to what would become record total snowfall amounts for December. Luckily, wind speeds were only 5 to 15 mph, which minimized the blowing and drifting of the snow. Snowfall amounts were geneally 6 to 8 inches, although a band of 9 to 9.5 inches extended from near Lone Rock along the Wisconsin River east across the northern part of Dane County into west-central Dodge County. Middleton (Dane Co.) came in with 9.6 inches. Janesville (Rock Co.), and Wisconsin Dells (Columbia Co.) both measured 7.0 inches, while 8.2 inches was reported from Ft. Atkinson (Jefferson Co.). The 8.2 inches measured at Madison's (Dane Co.), was a new calendar day record for the 18th, breaking the old one of 3.5 inches set back in 1896.

Synoptically, a surface low moved from northern Iowa across northern Illinois to northern Indiana, with an inverted trough of low pressure extending north of the low. Minor jet coupling was noted aloft.

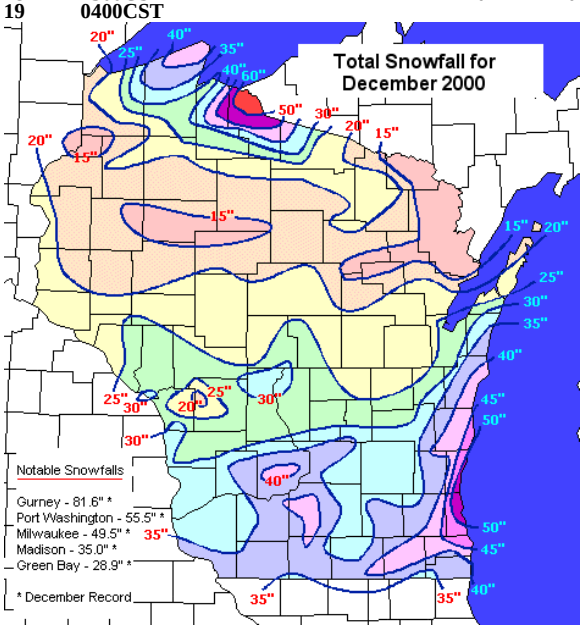
By the end of December, new snowfall or snowdepth records would be set across all of south-central and southeast Wisconsin. Madison registerd 35.0 inches for the month of December (old one was 32.8 inches in 1987), and on December 29th, tied the old snow depth record of 17 inches set back in 1990. The 35.0 inches was 287% of normal and 79% of the average winter snowfall! Other locations had montly totals of 30 to 43 inches (roughly 300 to over 500% of normal), or 80 to 133% of the average winter snowfall! Maximum snowdepths were measured on December 30th, generally ranging from 15 to 25 inches. Monroe (Green Co.) had 31 inches on the ground on the 30th, while Sun Praire (Dane Co.) and Argyle (Lafayette Co.) had 25 inches.

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm

WISCONSIN, Southeast

WIZ052-059>060-065>066-071>072 **Sheboygan - Washington - Ozaukee - Waukesha - Milwaukee - Racine - Kenosha**

18 1500CST 0 0 Heavy Snow
19 0400CST



Graphic of total snowfall for the month of December, 2000. New monthly records were established at many locations southeast of a line from La Crosse to Green Bay. Gurney (Iron Co.) measured 81.6 inches, and Port Washington had 55.5 inches.

Heavy snow fell across all of south-central and southeast Wisconsin, adding to what would become record total snowfall amounts for December. Luckily, wind speeds were generally 10 to 20 mph, which minimized the blowing and drifting of the snow. Snowfall amounts were geneally 6 to 8 inches, although a band of lake-enhanced amounts of 10 to 14.5 inches was noted from Sheboygan County to Racine County. A location northeast of Milwaukee's Mitchell Field gathered 14.5 inches and Howards Grove (Sheboygan Co.) came in with 14.0 inches. Mitchell Field registered 10.5 inches, while in Racine County, 10.0 inches were measured in Caledonia. The 8.1 inches measured at Mitchell Field was a new calendar day record for the 18th, breaking the old one of 7.1 inches set back in 1929.

Synoptically, a surface low moved from northern Iowa across northern Illinois to northern Indiana, with an inverted trough of low pressure extending north of the low. Minor jet coupling was noted aloft.

By the end of December, new snowfall or snowdepth records would be set across all of south-central and southeast Wisconsin. Milwaukee registerd a whopping 49.5 inches for the month of December (old one was 30.7 inches in 1951), and on December 21st, set a new December snow depth record of 32 inches (old record was 18 inches in 1978). The 49.5 inches was 430% of normal and 105% of the average winter snowfall! Other locations had monthly totals of 30 to 55.5 inches (roughly 250 to 694% of normal), or 65 to 145% of the average winter snowfall! Port Washington (Ozaukee County) was the location with the greatest totals and percentages just mentioned. Maximum snowdepths were measured on December 30th, generally ranging from 15 to 25 inches, although at least 30 inches was on the ground from southern Ozaukee County to northern Kenosha County. Racine had the most with 34 inches on the ground, while other notables were Mitchell Field with 30, Germantown (Washington Co.) with 27, and 20 inches at Waukesha (Waukesha Co.).

National Weather Service
Storm Data and Unusual Weather Phenomena

December 2000

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm